City of
SACRAMENTO

COMMUNITY DEVELOPMENT
DEPARTMENT

ENVIRONMENTAL PLANNING
SERVICES

300 Richards Boulevard
Third Floor
Sacramento, CA 95811

MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Mitigated Negative Declaration for the following described project:

Sacramento Mixed-Use Apartments Project P21-020) The proposed project consists of a request to demolish two existing one-story vacant buildings on site (approximately 1,548 square feet of demolition) and construct a new five-story mixed-use building consisting of approximately 121, 289 square feet with 108 dwelling units above ground floor commercial, and a parking garage on an approximate 1.51-acre site.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code.

A copy of this document and all supportive is available on the City's EIR Webpage at:
http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: Scott Johnson for Tom Buford

Date: November 13, 2023

City of
SACRAMENTO

LAST UPDATED: SEPTEMBER 2018

NOTE: This document includes templates for technical discussions, which should be reviewed with staff to confirm accuracy and completeness. Information that is typically required for all projects is shown in highlight.

SACRAMENTO MIXED-USE PROJECT (P21-020)
INITIAL STUDY FOR ANTICIPATED SUBSEQUENT PROJECTS UNDER THE 2035 GENERAL PLAN MASTER ENVIRONMENTAL IMPACT REPORT

This Initial Study has been prepared by the City of Sacramento, Community Development Department, 300 Richards Boulevard, Third Floor, Sacramento, CA 95811, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), *State CEQA Guidelines* (Title 14, Section 15000 *et seq.* of the California Code of Regulations) and the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

ORGANIZATION OF THE INITIAL STUDY

This Initial Study is organized into the following sections:

SECTION I – BACKGROUND: Provides summary background information about the project name, location, sponsor, and the date this Initial Study was completed.

SECTION II – PROJECT DESCRIPTION: Includes a detailed description of the proposed project.

SECTION III – ENVIRONMENTAL CHECKLIST AND DISCUSSION: Reviews proposed project and states whether the project would have additional significant environmental effects (project-specific effects) that were not evaluated in the Master EIR for the 2035 General Plan.

SECTION IV – ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Identifies which environmental factors were determined to have additional significant environmental effects.

I. BACKGROUND

Project Name:	Sacramento Mixed Use Project
File Number:	P21-020
Project Location:	3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive
Project Applicant:	Heritage Villa LLC PO Box Z San Jose, CA 95151
Project Planner:	Sierra Peterson Associate Planner SPeterson@cityofsacramento.org
Environmental Planner:	Ron Bess Associate Planner Rbess@cityofsacramento.org
Date Initial Study Completed:	November 16, 2023

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Sections 1500 *et seq*.). The Lead Agency is the City of Sacramento.

The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR and is consistent with the land use designation and the permissible densities and intensities of use for the project site as set forth in the 2035 General Plan. See *CEQA Guidelines* Section 15176 (b) and (d).

The City has prepared the attached Initial Study to review the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the 2035 General Plan Master EIR to determine their adequacy for the project (see *CEQA Guidelines* Section 15178(b),(c)) and identify any potential new or additional project-specific significant environmental effects that were not analyzed in the Master EIR and any mitigation measures or alternatives that may avoid or mitigate the identified effects to a level of insignificance, if any.

As part of the Master EIR process, the City is required to incorporate all feasible mitigation measures or feasible alternatives appropriate to the project as set forth in the Master EIR (*CEQA Guidelines* Section 15177(d)) Policies included in the 2035 General Plan that reduce significant impacts identified in the Master EIR are identified and discussed. See also the Master EIR for the 2035 General Plan. The mitigation

monitoring plan for the 2035 General Plan, which provides references to applicable general plan policies that reduce the environmental effects of development that may occur consistent with the general plan, is included in the adopting resolution for the Master EIR. See City Council Resolution No. 2015-0060, beginning on page 60. The resolution is available at

http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx.

This analysis incorporates by reference the general discussion portions of the 2035 General Plan Master EIR. (*CEQA Guidelines* Section 15150(a)). The Master EIR is available for public review at the City of Sacramento's web site at:

http://www.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports.aspx

The City is soliciting views of interested persons and agencies on the content of the environmental information presented in this document. Written comments should be sent at the earliest possible date, but no later than the 30-day review period ending December 18, 2023.

Please send written responses to:

Ron Bess, Associate Planner
Community Development Department
City of Sacramento
300 Richards Blvd, 3rd Floor
Sacramento, CA 95811
Direct Line: (916) 808-2762
RBess@cityofsacramento.org

SECTION V – DETERMINATION: States whether environmental effects associated with development of the proposed project are significant, and what, if any, added environmental documentation may be required.

SECTION VI – REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

APPENDICES:

A Air Quality Report

B Cultural Resources Evaluation

C Noise Report

II. PROJECT DESCRIPTION

INTRODUCTION

Project Location

The Project Site located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive and is approximately 1.51 acres and comprised of 7 parcels (APNs: 251-0325-004, 251-0325-005, 251-0325-006, 251-0325-008, 251-0325-009, 251-0325-010, and 251-0325-011). The Project Site is within the North Sacramento Community Plan Area and is bound by Arcade Boulevard to the south, Marysville Boulevard to the east, and Ermina Drive to the west and north (**Figure 1, Project Location**). The Project Site is approximately 215 feet south of Arcade Creek and 350 feet south of Hagginwood Park.

Project Description

Project Background

The Project site currently contains two vacant buildings on the parcel located on the south end of the Project Site at 3201 Marysville Boulevard (APN: 251-0325-006) The remaining six parcels to the north are vacant. The Project Site is generally surrounded by commercial uses, including a laundromat, health center, tire shop, mechanics shop, market, and accountant office. There are three single-family residential uses immediately north of the Project Site and two immediately to the west. The Project Site is located within the North Sacramento Community Plan Area and is designated as a Suburban Corridor in the 2035 Land Use and Urban Form map. The Project Site and its surrounding parcels are currently zoned General Commercial (C-2).

Proposed Project

The applicant proposes to demolish two existing one-story vacant buildings (approximately 1,548 square feet of demolition) and construct a new mixed-use building (approximately 121,389 square feet) with ground floor commercial, parking garage, and four floors of apartments located above ("Project"), see **Figure 2, Conceptual Site Plan Floor 1; Figure 3 Conceptual Site Plan Floor 2; Figure 4 Conceptual Site Plan Floor 3 and 4; Figure 5 Conceptual Site Plan Floor 5;** and **Table 1, Project Features**. The mixed-use development would include ground floor retail, coffee, and/or restaurant uses with public plazas for outdoor dining, and amenities, utilities, and parking spaces to accommodate commercial customers and residents. The apartments would be located on floors two through five and include a mix of one- and two-bedroom units, **Table 2, Apartment Unit Mix**. The one-bedroom units will be 738 square feet, and the two-bedroom units will be 1,028 square feet in size. The 2nd floor would include a 666 square foot community

room, private patios, and common open space. The five-story building will have a maximum height of 52 feet to the roof. The Project would also include landscaping comprised of street trees (12 Cork Oak, 6 Sawleaf Zelkova, and 17 Western Redbud), shrubs, planters, and park strips.

Table 1
Project Features

Project Features	Square Footage (sq. ft.)
Ground Floor	7,951
Retail/Coffee/Restaurant	3,290
Gym/Lobby/Stairs	2,865
Utility/Trash	1,796
2nd Floor	30,718
3rd Floor	30,052
4th Floor	30,052
5th Floor	22,616
Gross Square Footage	**121,389**

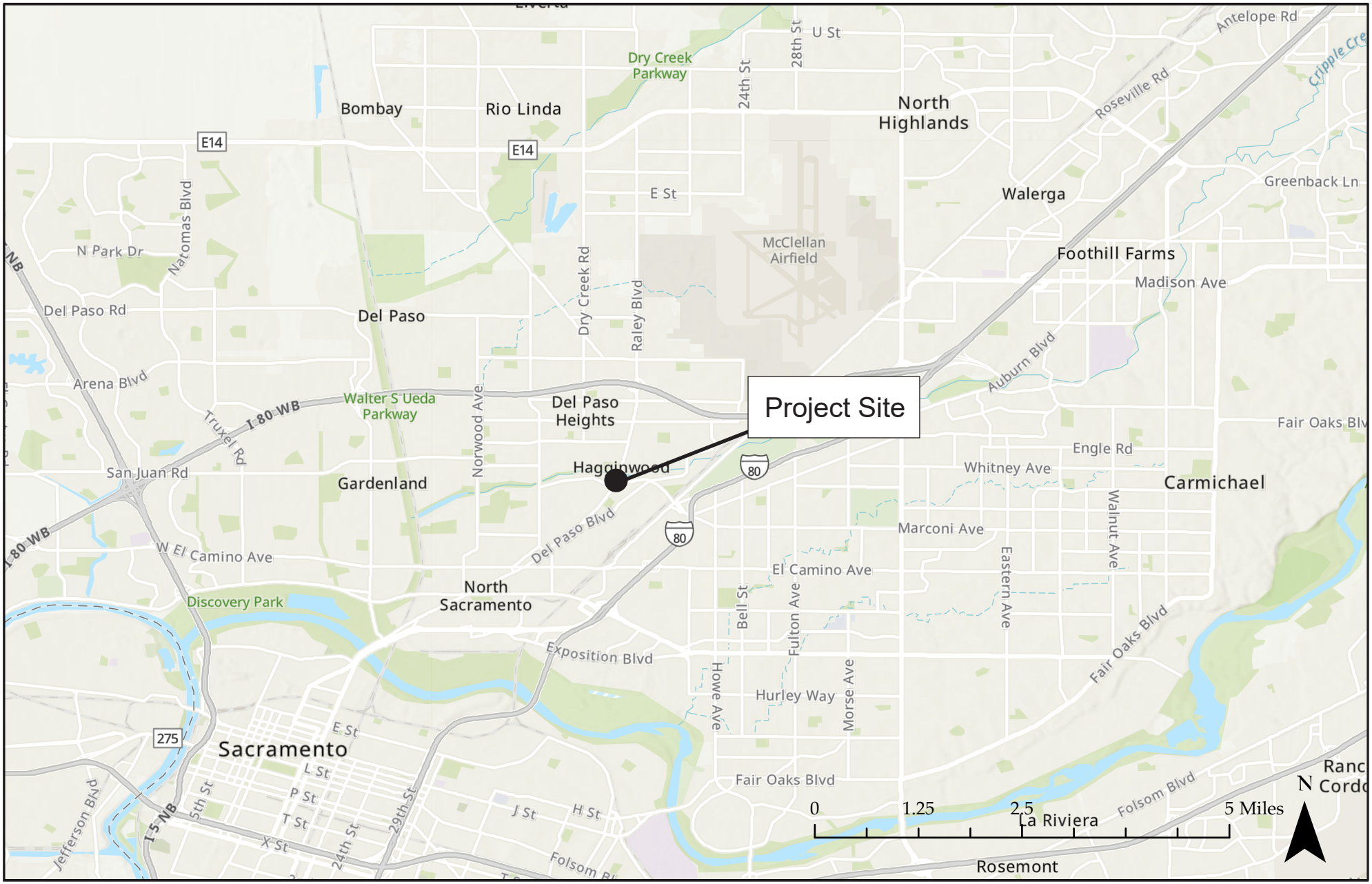
Source: The Guzzardo Partnership, Inc., 2022

Table 2
Apartment Unit Mix

Floor	One Bedroom	Two Bedroom	Total Units
2nd Floor	11	18	29
3rd Floor	11	18	29
4th Floor	11	18	29
5th floor	8	13	21
Total	**41**	**67**	**108**

Source: The Guzzardo Partnership, Inc., 2023

Building elevations for the Project are shown in **Figure 6, Building Elevations**. As shown, the Project would provide a white and gray stucco five-story building with a roof height of 52 feet. Architectural features will include balconies with metal vertical bars, metal mesh would enclose the parking garage area, and a 6-foot wrought iron fence would be provided along the western perimeter of the Project Site.



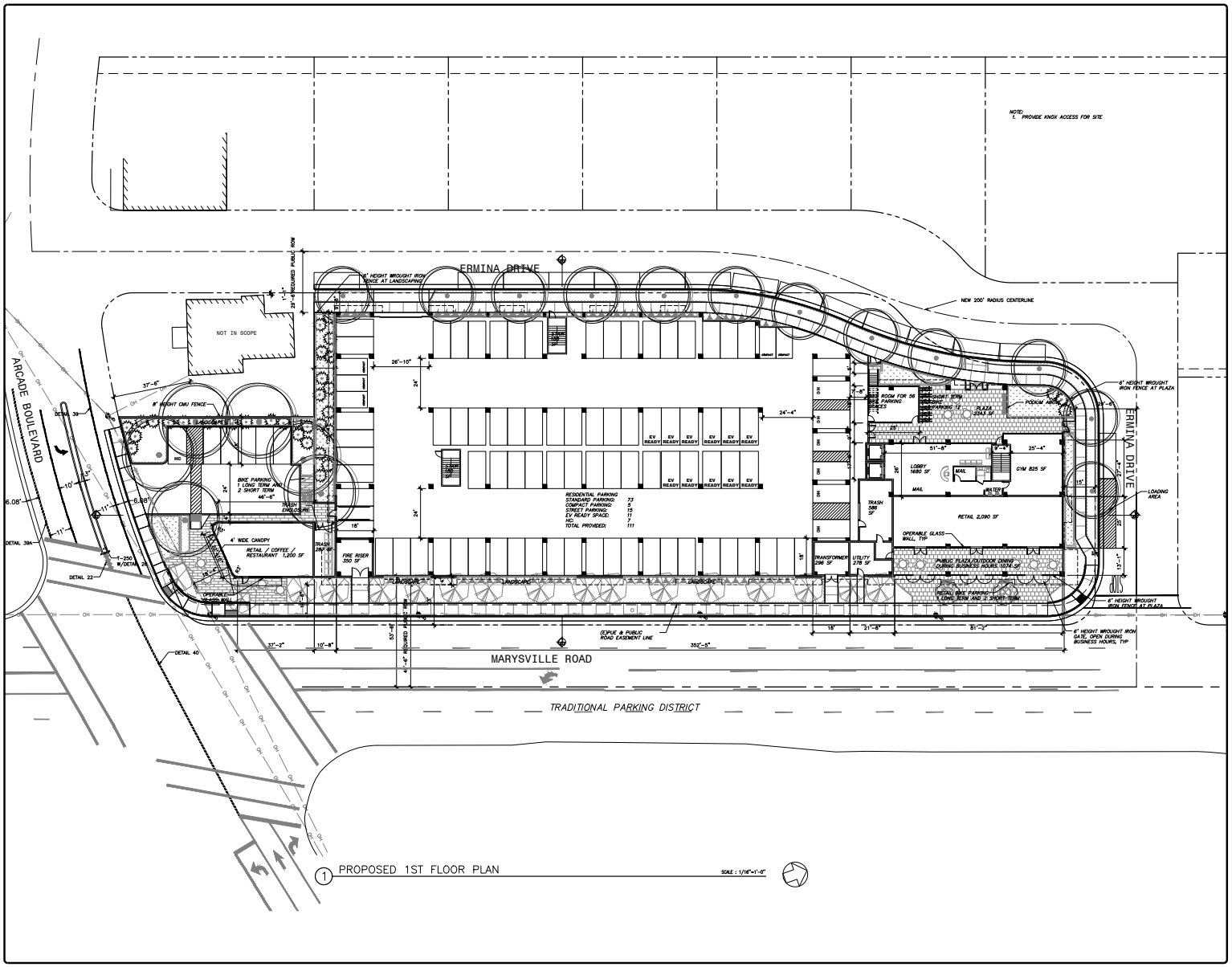
SOURCE: Esri, 2023

FIGURE 1

IMPACT SCIENCES

Project Location

1338.0041•06/23



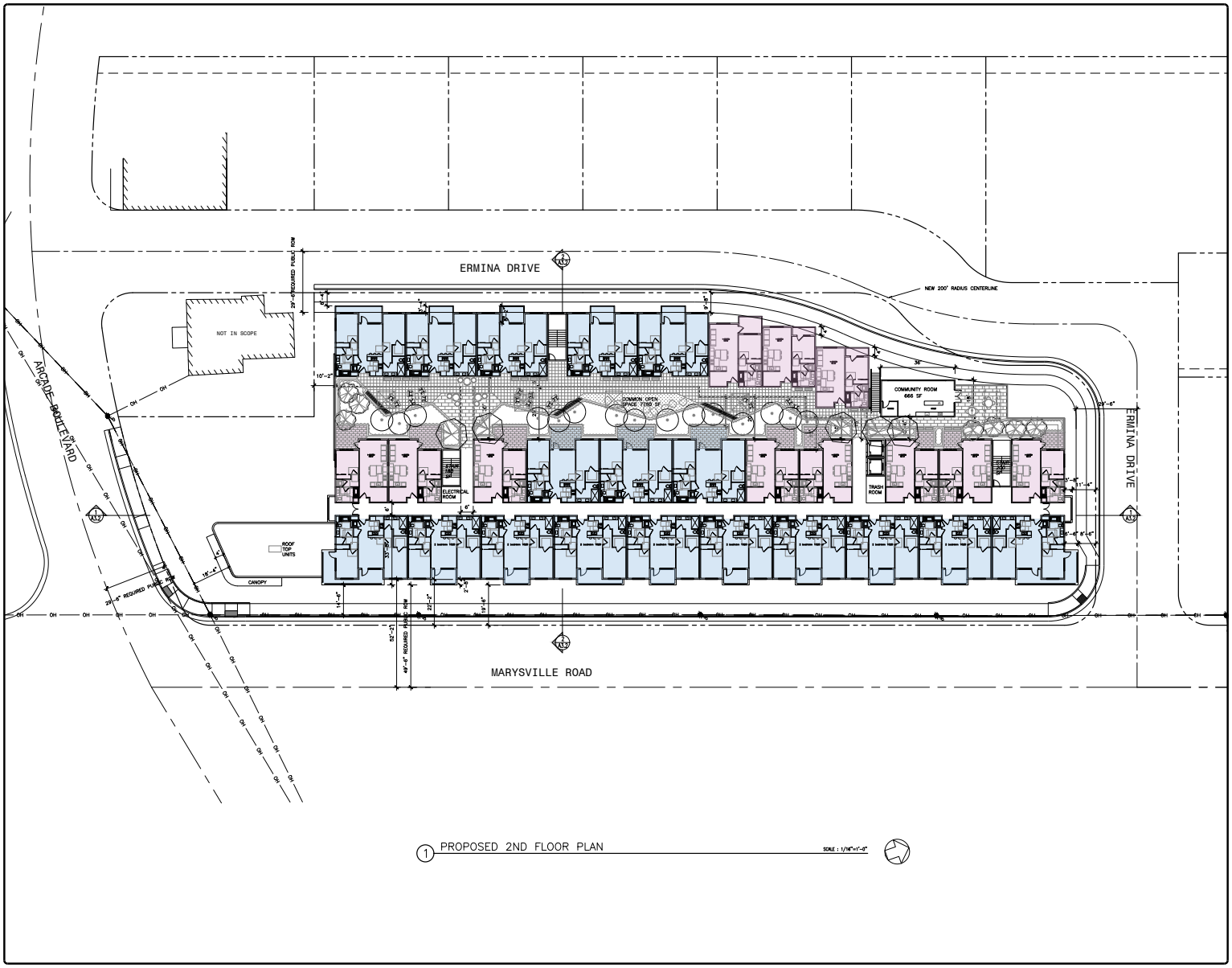
SOURCE: Esri, 2023

FIGURE **2**

IMPACT SCIENCES

Conceptual Site Plan Floor 1

1338.0041•06/23



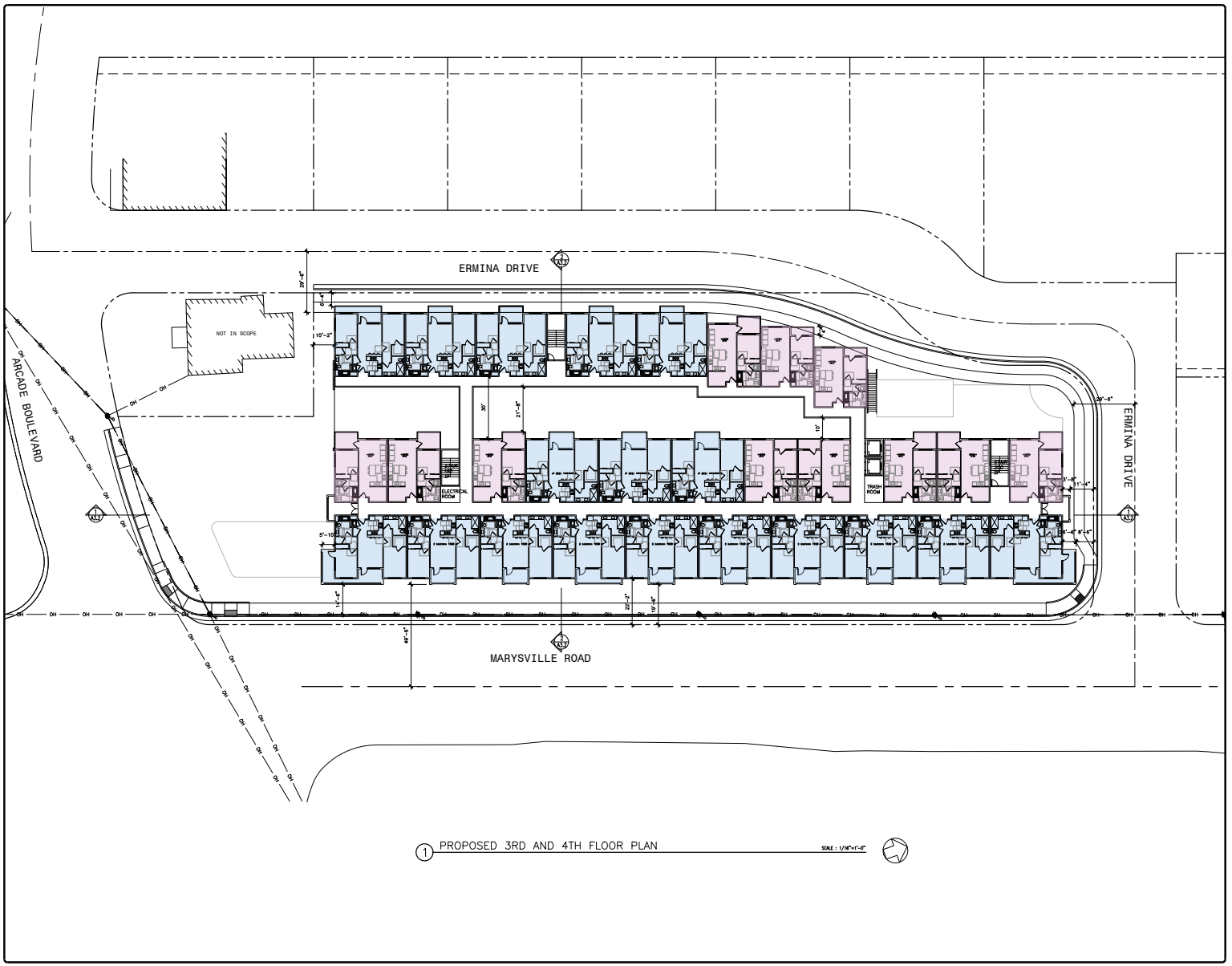
SOURCE: Esri, 2023

FIGURE **3**

IMPACT SCIENCES

Conceptual Site Plan Floor 2

1338.0041•06/23



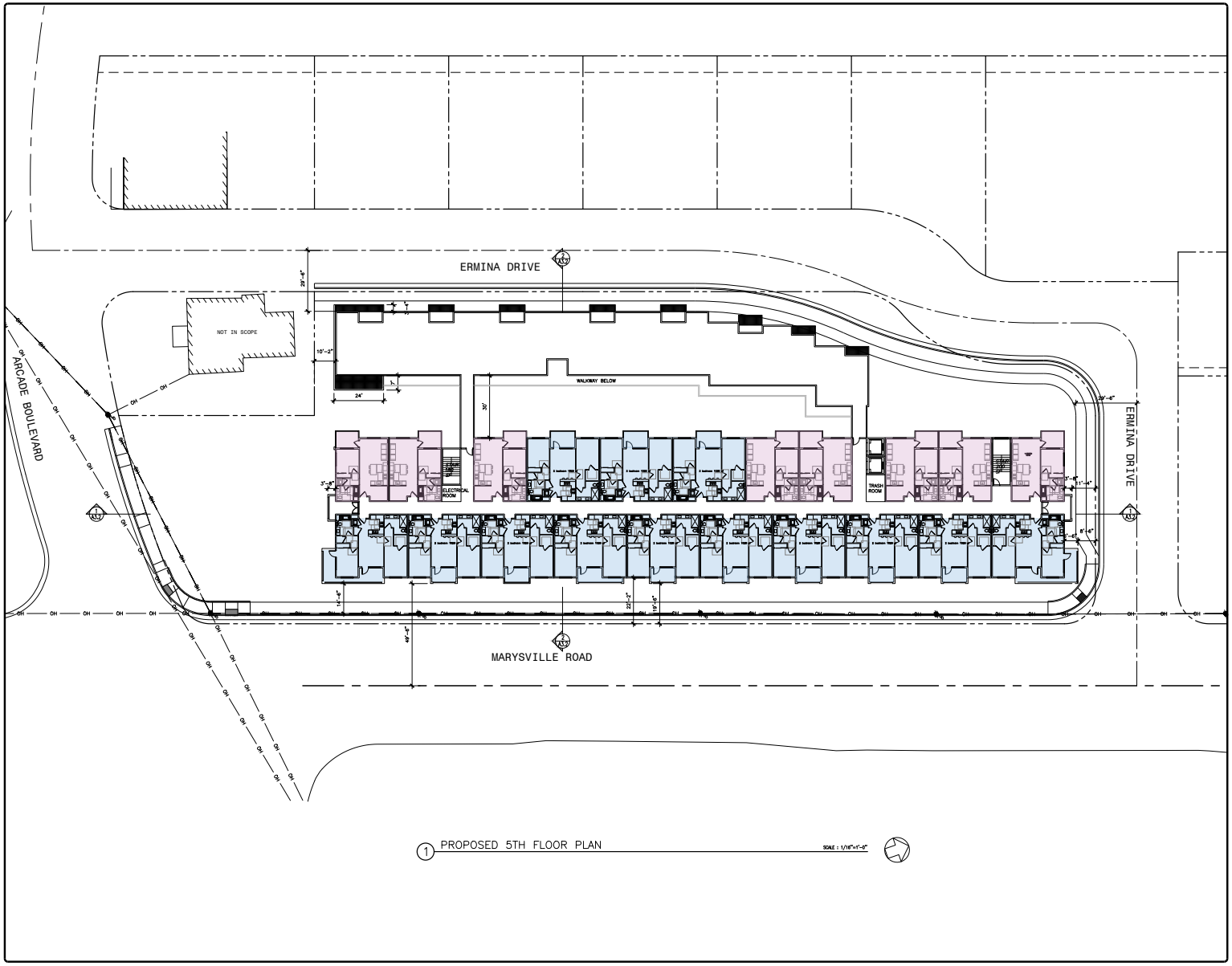
SOURCE: Esri, 2023

FIGURE **4**

IMPACT SCIENCES

Conceptual Site Plan Floor 3 and 4

1338.0041•06/23



SOURCE: Esri, 2023

FIGURE **5**

IMPACT SCIENCES

Conceptual Site Plan Floor 5

1338.0041•06/23

2 ERMINIA DR – LOOKING SOUTH – DAY
NO SCALE

2 MARYSVILLE BLVD @ ARCADE BLVD – LOOKING NORTH – DAY
NO SCALE

SOURCE: SCDC, 2023

FIGURE 6

Building Elevations

IMPACT SCIENCES

1338.0041•06/23

Landscaping and Trees

The Project Site does not currently include any trees. There are some bushes and grass located on the undeveloped parcels. The Project would include landscaping comprised of street trees (12 Cork Oak, 6 Sawleaf Zelkova, and 17 Western Redbud), shrubs, planters, and park strips along the perimeter of the Project Site.

Access/Parking

Regional access to the Project Site is provided by the Dwight D Eisenhower Highway (Interstate 80, I-80) approximately 1 mile to the north, and Capital City Freeway (Business Loop I-80) approximately 0.75 miles to the east. The Project Site currently contains three inaccessible parking spaces that will be replaced with a total of 111 parking spaces for short-term commercial and residential uses. See **Table 3, Parking Spaces**, for a breakdown of the parking spaces provided by the Project. Per Sacramento City Code 17.608.020J, there is no commercial parking required. Driveway access to the commercial parking spaces will be provided by Arcade Boulevard and access to the residential parking spaces will be provided by Ermina Drive.

Table 3
Parking Spaces

Type	Units
Standard	73
Compact	5
Street	15
EV Ready	11
Handicap	7
Total	**111**

Source: The Guzzardo Partnership, Inc., 2022

In addition, the Project will provide 56 residential bike storage spaces, 11 short-term residential bike parking spaces, 1 long-term commercial bike parking space, and 2 short-term commercial bike parking spaces. The Project includes a Surface Improvement Plan that will provide a new centerline for Ermina Drive.

The Project Site is located approximately 0.49 miles from the Sacramento Regional Transit (SacRT) Blue Line Marconi/Arcade Light Rail Station. In addition, the north bound bus stop for the SacRT 86 bus line is located approximately 50 feet to the east of the Project Site, across Marysville Boulevard; and the east bound bus stop for the SacRT 86 bus line is located approximately 250 feet from the Project Site.

Land Use

The North Sacramento Community Plan (Community Plan), 2035 Land Use and Urban Form Map, shows that the entire Project Site is designated as Suburban Corridor. The Project Site is zoned General Commercial (C-2). Surrounding land uses immediately adjacent to the Project Site primarily include commercial uses. However, there are five single-family residential uses located adjacent to the Project Site. Parcels immediately adjacent to the Project Site are also zoned C-2. The closest sensitive receptors include parcels designated Residential Single Family and zoned Standard Single Family (R-1) approximately 100 feet west of the Project Site.

Utilities

The Project would connect to the existing 12-inch public water mains located underground along Marysville Boulevard .. New sewer and drainage taps will be constructed for the mixed-use building. The Project would construct new storm drainage service taps that will connect to the existing storm drainage service taps on 18-inch Marysville Boulevard and Ermina Drive. The existing electrical and telecommunication connections are provided via overhead joint poles.

Project Construction Sequencing

For the purpose of analyzing impacts associated with construction activities, this analysis assumes a construction schedule of approximately 18 months with demolition beginning in early 2024. This analysis assumes the Project will be fully operational in 2025. This assumption is conservative and yields the maximum daily impacts. Construction activities associated with the Project would be undertaken in three main steps: (1) demolition and removal of existing debris, (2) grading/foundation preparation and (3) building construction.

Demolition and removal of existing debris would occur for approximately one month. This phase would include the demolition of the two existing one-story vacant buildings (approximately 1,548 square feet of demolition).

Grading and foundation preparation would occur for approximately 2 months and this analysis assumes cut/fill operations would balance soil on site and no soil import or export would be required.

Building construction would occur for approximately 15 months and would include the construction of the proposed structure, connection of utilities, laying irrigation for landscaping, architectural coatings, paving and landscaping the Project Site.

Consistent with the assumptions included within the California Emissions Estimator Model (CalEEMod), the following maximum daily equipment by phase will be assumed. As no traffic report will be prepared for the Project, air quality, greenhouse gas, and noise impacts will be determined based off of the default trip generation built into CalEEMod. These are daily estimates – not total pieces used over the duration of construction. Please review the daily equipment totals provided below from the air quality model based on the project site size (between 1 and 2 acres).

- Demolition: 1 concrete/industrial saw, 3 tractors/loaders/backhoes, 1 rubber-tired dozer
- Grading: 1 grader, 1 rubber tired dozer, 2 tractors/loaders/backhoes
- Building Construction: 1 crane, 1 forklift, 1 generator set, 1 tractor/loader/backhoe, 3 welders
- Paving: 1 cement and mortar mixer, 1 paver, 1 paving equipment, 1 roller, 1 tractor/loader/backhoe
- Architectural Coating: 1 air compressor

Conventional construction equipment would be used, such as excavators, backhoes, and both light- and heavy-duty trucks. Truck trips are expected to reach the Project Site via I-80, Arcade Boulevard, and Marysville Boulevard. Truck trips for off haul of excavated materials are expected to travel along these same routes and arterials to dispose of construction and demolition debris.

Required Permits

Discretionary entitlements, reviews, and approvals required for implementation of the Project would include, but would not necessarily be limited to, the following:

- Site Plan Design Review (Staff-Level)
- Administrative Parking Permit (Under Separate Review)

III. ENVIRONMENTAL CHECKLIST & DISCUSSION

LAND USE, POPULATION AND HOUSING, AGRICULTURAL RESOURCES, AND WILDFIRE

Introduction

The California Environmental Quality Act (CEQA) requires the Lead Agency to examine the effects of a project on the physical conditions that exist within the area that would be affected by the project. CEQA also requires a discussion of any inconsistency between the proposed project and applicable general plans and regional plans.

An inconsistency between the proposed project and an adopted plan for land use development in a community would not constitute a physical change in the environment. When a project diverges from an adopted plan, however, it may affect planning in the community regarding infrastructure and services, and the new demands generated by the project may result in later physical changes in response to the project.

In the same manner, the fact that a project brings new people and/or creates demand for housing to a community does not, by itself, change the physical conditions. An increase in population may, however, generate changes in retail demand or demand for governmental services, and the demand for housing may generate new activity in residential development. Physical environmental impacts that could result from implementing the proposed project are discussed in the appropriate technical sections.

This section of the initial study identifies the applicable land use designations, plans and policies, and permissible densities and intensities of use, and discusses any inconsistencies between these plans and the Project. This section also discusses agricultural resources and the effect of the Project on these resources. This section also includes a discussion regarding the Project's effect on wildfires.

Discussion

Land Use

The Project Site has been designated as Suburban Corridor in the 2035 General Plan and is zoned General Commercial (C-2).

The Project Site is located in an urbanized portion of the community. The area surrounding the Project Site is predominantly suburban, and the immediate surrounding uses are predominantly commercial and residential. Development of the Project Site as proposed would alter the existing landscape, but the Project

Site has been designated for urban development in the 2035 General Plan and the Planning and Development Code, and the Project is consistent with these planning designations.

The Project would be consistent with the intended uses for the Suburban Corridor land use designation in the 2035 General Plan and meet the development standards outlined in the Planning and Development Code for the land use and zone. The proposed building would be 5 stories tall with a maximum height of 52 feet and include a Floor Area Ratio (FAR) of 1.98; this would meet the maximum allowable height (65 feet) and FAR (2.00). As such, the Project would be consistent with the General Plan and Planning and Development Code.

As outlined in the Sacramento Municipal Code Title 17.216.210 of the Planning and Development Code Division II Zoning Districts and Land Use Regulations, permitted uses under the C-2 Zone included multi-unit dwelling, restaurants, and retail uses. The Project would introduce 108 multi-family residential units, restaurants, and retail uses. The Project would develop approximately 3,290 square feet of retail space, which would be consistent with the City's maximum size of 40,000 square feet.

Population and Housing

The Project involves the construction of up to 108 residential units. Based on the City's average household size of 2.59 persons, the Project could result in a maximum population increase of approximately 280 persons.[1] As of 2022, the City has an estimated population of 518,037 persons.[2] Additionally the Housing Element of the 2035 General Plan forecasts the City's population to reach 640,381 persons by the year 2035, representing a total increase of 122,344 persons from the existing population. Thus, the direct increase in population generated by the Project would represent less than one percent of the City's projected population increase between 2022 and 2035. Additionally, the Project Site has a land use designation of Suburban Corridor, which allows for multi-family residential development and commercial/retail development. As such, the Project would not result in impacts related to population and housing.

Agricultural Resources

The Master EIR discussed the potential impact of development under the 2035 General Plan on agricultural resources (see Master EIR, Chapter 4.1). In addition to evaluating the effect of the General Plan on sites within the City, the Master EIR noted that to the extent the 2035 General Plan accommodates future growth within the City limits, the conversion of farmland outside the City limits is minimized. The Master EIR

1 California Department of Finance Demographic Research Unit. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark. May 2022.

2 City of Sacramento. Fire Department. https://www.cityofsacramento.org/fire, accessed June 1, 2023.

concluded that the impact of the 2035 General Plan on agricultural resources within the City was less than significant.

The Project Site does not contain soils designated as Important Farmland (i.e., Prime Farmland, Unique Farmland or Farmland of Statewide Importance).[3] The Project Site is not zoned for agricultural uses, and there are no Williamson Act contracts that affect the Project Site.[4] No existing agricultural or timber-harvest uses are located on or in the vicinity of the Project Site. Development of the Project Site would result in no impact on agricultural resources.

Wildfire

The Project Site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones.[5] The Project Site and surrounding land uses are developed with urban land uses and do not present a wildland fire hazard. Furthermore, the Project Site is not located along any major evacuation routes that are designated within the City's Emergency Operations Plan.[6] Therefore, the Project would not substantially impair an adopted emergency response plan or emergency evacuation plan, and no impacts would occur.

---

3 California Department of Conservation "Important Farmland Finder." Available online at: https://maps.conservation.ca.gov/dlrp/ciff/, accessed May 12, 2023.

4 Sacramento Area of Official Governments, "Williamson Act Parcels." Available online at: https://data.sacog.org/datasets/199810930ef9465a9a1ae0315e5a7535_0/explore?location=38.377321%2C-121.419280%2C10.39, accessed May 12, 2023.

5 Office of the State Fire Marshal. Sacramento County, "State Responsibility Area Fire Hazard Severity Zones." Available online at: https://osfm.fire.ca.gov/media/2x4l31tk/fhsz_county_sra_11x17_2022_sacramento_ada.pdf, accessed May 12, 2023.

6 City of Sacramento, *Emergency Operations Plan 2018*. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/Emergency-Services/2018-City-of-Sacramento-Emergency-Operations-Plan.pdf?la=en, accessed May 12, 2023.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
1. AESTHETICS			
Would the project:	☐	☐	☒
A) Create a source of glare that would cause a public hazard or annoyance?			
B) Create a new source of light that would be cast onto oncoming traffic or residential uses?	☐	☐	☒
C) Substantially degrade the existing visual character of the site or its surroundings?	☐	☐	☒

Environmental Setting

The Project Site consists of several parcels that are located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive. The Project Site is designated as Suburban Corridor, and its immediate surroundings are designated as either Suburban Neighborhood Low or Public uses by the North Sacramento Community Plan.[7] On-site topography is relatively flat.

The existing on-site conditions of the Project Site consist of two vacant buildings with associated surface parking spaces and vacant parcels. Public views of the Project Site include views from motorists, bicyclists, and pedestrians travelling along Marysville Boulevard, Ermina Drive, and Arcade Boulevard, facing west, south/east, and north respectively. Given the Project Site is predominantly vacant there are no existing sources of light and glare within the site.

Due to distance and intravenous trees and structures, there are no scenic resources or vistas identified by the City that are visible from the Project Site. The Project Site does not contain any scenic resources and is not contained within an area designated as a scenic resource or vista. Additionally, no scenic roadways are within or adjacent to the Project Site.

Standards of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, thresholds of significance adopted by the City

7 City of Sacramento, *North Sacramento Community Plan*. Available online at: https://www.cityofsacramento.org/~/media/Corporate/Files/CDD/Planning/Community%20Plans/North%20Sacramento.pdf, accessed on May 26, 2023.

in applicable general plans and previous environmental documents, and professional judgment. A significant impact related to aesthetics would occur if the project would:

- substantially interfere with an important scenic resource or substantially degrade the view of an existing scenic resource; or
- create a new source of substantial light or glare that is substantially greater than typical urban sources and could cause sustained annoyance or hazard for nearby sensitive receptors.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR described the existing visual conditions in the General Plan, and the potential changes to those conditions that could result from development consistent with the 2035 General Plan (see Master EIR, Chapter 4.13, Visual Resources).

The Master EIR identified potential impacts for light and glare (Impact 4.13-1) and concluded that impacts would be less than significant.

Answers to Checklist Questions

A & B) No additional significant environmental effect.

The Project includes infill development on multiple adjacent parcels that are primarily vacant with no existing source of light and glare. Therefore, Project implementation could result in new sources of spillover lighting or glare effects in the Project area. These sources may include building lighting and security lighting in the parking areas. The closest sensitive receptor is the single-family residential homes located less than 50 feet north and west of the Project Site.

The Project would be subject to City site plan and design review prior to approval. Exterior lighting conditions will utilize the Crime Prevention through Environmental Design (CPTED) recommendations following review of the site plan by the City of Sacramento Police Department (SPD).

The Project would be required to comply with the City's General Plan, Policy ER 7.1.3, which requires all new developments to minimize the any misdirected or excessive outdoor lighting. Additionally, the Project would comply with General Plan, Policy ER 7.1.4, which prohibits new development from using mirrored glass, black glass, or metal building materials that exceed 50 percent of any street-facing surface of a primarily residential building. Furthermore, the Project would comply with all applicable policies set forth

in the General Plan pertaining to land use and the preservation of visual resources, as well as all applicable regulations set forth in the City's Municipal Code.

In conclusion, site plan review as well as adherence to local policies and regulations would ensure that the Project would not introduce new sources of light and glare that would have additional environmental effects regarding sources of glare and new light sources.

C) No additional significant environmental effect.

The City of Sacramento is primarily built out. However, as a new infill development, the Project would result in changes to the visual character of the area. As stated, the Project Site is designated as a Suburban Corridor in the City's General Plan. As a new mixed-use development with retail, services, and multi-family residential uses, the Project would be consistent with the City's intended uses for areas designated as Suburban Corridors. Furthermore, the Project would adhere to all applicable design requirements outlined in the City's Municipal Code. Additionally, the Project would not impede the existing public views of any City-identified scenic resources.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Aesthetics.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
2. AIR QUALITY			
Would the project:	☐	☐	☒
A) Result in construction emissions of NO_x above 85 pounds per day?			
Result in operational emissions of NO_x or ROG above 65 pounds per day?	☐	☐	☒
C) Violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?	☐	☐	☒
D) Result in PM10 and PM2.5 concentrations that exceed SAMQMD requirements?	☐	☐	☒
E) Result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm)?	☐	☐	☒
F) Result in exposure of sensitive receptors to substantial pollutant concentrations?	☐	☐	☒
G) Result in TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources?	☐	☐	☒

The following discussion is based on the information contained in the Project's Air Quality Report, which is included as **Appendix A, Air Quality Report,** to this Initial Study.

Environmental Setting

The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs

often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is about 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the "Delta breeze" that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

Criteria Air Pollutants

Concentrations of emissions from criteria air pollutants (the most prevalent air pollutants known to be harmful to human health) are used to indicate the quality of the ambient air. Criteria air pollutants include ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable and fine particulate matter (PM10 and PM2.5), and lead. The sources of criteria air pollutants and their respective acute and chronic health impacts are described in **Table 4**, **Sources and Health Effects of Criteria Air Pollutants**.

Table 4
Sources and Health Effects of Criteria Air Pollutants

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Ozone	Secondary pollutant resulting from reaction of ROG and NOX in presence of sunlight. ROG emissions result from incomplete combustion and evaporation of chemical solvents and fuels; NOX results from the combustion of fuels	Increased respiration and pulmonary resistance; cough, pain, shortness of breath, lung inflammation	Permeability of respiratory epithelia, possibility of permanent lung impairment
Carbon monoxide (CO)	Incomplete combustion of fuels; motor vehicle exhaust	Headache, dizziness, fatigue, nausea, vomiting, death	Permanent heart and brain damage

Pollutant	Sources	Acute[1] Health Effects	Chronic[2] Health Effects
Nitrogen dioxide (NO2)	Combustion devices; e.g., boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines	Coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis or pulmonary edema; breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, death	Chronic bronchitis, decreased lung function
Sulfur dioxide (SO2)	Coal and oil combustion, steel mills, refineries, and pulp and paper mills	Irritation of upper respiratory tract, increased asthma symptoms	Insufficient evidence linking SO2 exposure to chronic health impacts
Respirable particulate matter (PM10), Fine particulate matter (PM2.5)	Fugitive dust, soot, smoke, mobile and stationary sources, construction, fires and natural windblown dust, and formation in the Atmosphere by condensation and/or transformation of SO2 and ROG	Breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, Premature death	Alterations to the immune system, carcinogenesis
Lead	Metal processing	Reproductive/developmental effects (fetuses and children)	Numerous effects including neurological, endocrine, and cardiovascular effects

Notes: NOX = oxides of nitrogen; ROG = reactive organic gases.
1. "Acute" refers to effects of short-term exposures to criteria air pollutants, usually at fairly high concentrations.
2. "Chronic" refers to effects of long-term exposures to criteria air pollutants, usually at lower, ambient concentrations.
Source: EPA 2018

Existing Air Quality

The U.S. Environmental Protection Agency (EPA) has been charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which was enacted in 1970 and most recently amended by Congress in 1990. The CAA required EPA to establish the National Ambient Air Quality Standards (NAAQS) for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM10, PM2.5, and lead. CAA also requires each State to prepare a State implementation plan (SIP) for attaining and maintaining the NAAQS. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies.

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required CARB to establish its own California Ambient Air Quality Standards (CAAQS). CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS.

The SVAB is currently designated as nonattainment for the NAAQS 8-hour ozone standard and the CAAQS for both 1-hour and 8-hour O_3 standard. The SVAB is also currently designated as nonattainment for both NAAQS and CAAQS 24-hour PM10 standards. In addition, the SVAB is currently designated as nonattainment for the NAAQS 24-hour PM2.5 standard. The air basin is designated as unclassified or in attainment for the remaining criteria air pollutants (SMAQMD 2019).

Toxic Air Contaminants

According to the California Almanac of Emissions and Air Quality (CARB 2013), the majority of the estimated health risks from toxic air contaminants (TACs) can be attributed to relatively few compounds, the most important being diesel particulate matter (diesel PM). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emissions control system is being used. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Sensitive Receptors

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. The closest air quality sensitive receptors are single-family residences located 35 feet to the west and to the north of the Project Site, the Good Samaritan Church of God/the Hagginwood Academy for Children located 50 feet to the east of the Project Site, single-family residences located 135 feet from the southeast corner of the Project Site, and a single-family residence 125 feet from the southwest corner of the Project Site.

Standards of Significance

For purposes of this Initial Study, air quality impacts may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NOx above 85 pounds per day;

- Operational emissions of NOx or ROG above 65 pounds per day;
- Violation of any air quality standard or contribute substantially to an existing or projected air quality violation;
- Any increase in PM10 concentrations, unless all feasible Best Available Control Technology (BACT) and Best Management Practices (BMPs) have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- CO concentrations that exceed the 1-hour State ambient air quality standard (i.e., 20.0 ppm) or the 8-hour State ambient standard (i.e., 9.0 ppm); or
- Exposure of sensitive receptors to substantial pollutant concentrations.

Ambient air quality standards have not been established for toxic air contaminants (TAC). TAC exposure is deemed to be significant if:

- TAC exposures create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR addressed the potential effects of the 2035 General Plan on ambient air quality and the potential for exposure of people, especially sensitive receptors such as children or the elderly, to unhealthful pollutant concentrations. See Master EIR, Chapter 4.2.

Policies in the 2035 General Plan in Environmental Resources were identified as mitigating potential effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet state and federal air quality standards; Policy ER 6.1.2 requires the City to review proposed development projects to ensure that the projects incorporate feasible measures that reduce construction and operational emissions; Policy ER 6.1.4 and ER 6.1.11 calls for coordination of City efforts with SMAQMD; and Policy ER 6.1.15 requires the City to give preference to contractors using reduced-emission equipment.

The Master EIR identified exposure to sources of toxic air contaminants (TAC) as a potential effect. Policies in the 2035 General Plan would reduce the effect to a less-than-significant level. The policies include ER 6.1.4, requiring coordination with SMAQMD in evaluating exposure of sensitive receptors to TACs, and

impose appropriate conditions on projects to protect public health and safety; as well as Policy LU 2.7.5 requiring extensive landscaping and trees along freeways fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

Answers to Checklist Questions

A) No additional significant environmental effect.

The Project will emit an estimated 15.9 pounds per day of NOx during the construction year of 2024 and 16.1 pounds per day during the construction year of 2025. The Project's construction and operational emissions would not exceed the SMAQMD's thresholds for any criteria air pollutants. The Project will not result in construction emissions of NOx above 85 pounds per day.

B) No additional significant environmental effect.

Project operations are projected to emit a total of 11.9 pounds of ROG per day and 9.6 pounds of NOx per day; these values are well below the thresholds of 65 pounds per day. The Project's construction and operational emissions would not exceed the SMAQMD's thresholds for any criteria air pollutants. The Project will not result in operational emissions of NOx or ROG above 65 pounds per day.

C) No additional significant environmental effect.

The Project is well below the thresholds established by the SMAQMD, as shown in answers **A** and **B**, above and **D**, below. The Project would not have a cumulatively considerable contribution to any existing or projected air quality violation.

D) No additional significant environmental effect.

The Project will implement all SMAQMD BMPs, such as watering all exposed surfaces two times daily and limiting vehicle speeds on unpaved roads to 15 miles per hour. With the application of BMPs, the Project qualifies to be compared against the SMAQMD threshold of 80 pounds per day or 14.6 tons per year of PM10 and 82 pounds per day or 15 tons per year of PM2.5. See **Mitigation Measures AQ-1** through **AQ-6**, below for SMAQMD's BMPs. The Project is projected to emit 3.61 pounds of PM10 per day in the construction year of 2024 and 2.05 pounds of PM10 per day in the construction year of 2025. The Project is projected to emit 2.04 pounds of PM2.5 during the construction year of 2024 and 0.88 pounds of PM2.5 per day during the construction year of 2025. For operations, the Project is projected to emit 12.9 pounds of PM10 per day and 3.39 pounds of PM2.5 per day. The Project will not result in PM10 and PM2.5 concentrations that exceed SMAQMD thresholds.

E) No additional significant environmental effect.

The Project would not result in potentially significant CO "hot spots" and a Project-specific CO hotspots analysis is not required to reach this conclusion. It has long been recognized that CO exceedances ("hot spots") are caused by vehicular emissions, primarily when idling at intersections. The Basin has been in attainment for CO for several years, and operations of the Project are not anticipated to generate substantial CO emissions. The SMAQMD developed a screening threshold in 2011, which states that any project involving an intersection with 31,600 vehicles per hour or more will require detailed analysis. The intersection of Arcade Boulevard and Marysville Boulevard receives an average daily traffic count of 2,546; the intersection associated with the Project is well below the 31,600 vehicles per hour threshold. Furthermore, vehicle emissions standards have become increasingly more stringent in the last twenty years. With the turnover of older vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations for the Project vicinity have historically met state and federal attainment status for the air quality standards. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. Therefore, the Project would not have the potential to cause or contribute to an exceedance of the California one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively. Impacts with respect to localized CO concentrations would be less than significant. The Project will not result in CO concentrations that exceed the 1-hour state ambient air quality standard (i.e., 20.0 ppm) or the 8-hour state ambient standard (i.e., 9.0 ppm).

F) No additional significant environmental effect.

The Project's construction and operational emissions would not exceed the SMAQMD's thresholds for any criteria air pollutants. The Project will not expose sensitive receptors to substantial pollutant concentrations. As shown in answers **A**, **B**, **D**, and **E** above, the Project would not exceed any thresholds established by the SMAQMD for neither construction nor operation of the Project.

G) No additional significant environmental effect.

The Project is an infill mixed-use residential development that would not include stationary sources that have potential to emit toxic air contaminants (TACs). Regarding exposure to mobile source TAC emissions, the Project is consistent with its land use designation and its zoning and is not located next to any high traffic freeways or roads. According to the CARB Air Quality and Land Use Handbook, it is advised to avoid siting new sensitive land uses within 500 feet of a freeway or urban road that receives 100,000 vehicles per day. Arcade Boulevard and Marysville Boulevard receive significantly less than 100,000 vehicles per day (the intersection of Arcade Boulevard and Marysville Boulevard receives an average daily traffic count

of 2,546). As such, TAC exposure from mobile sources would be less than significant. The Project will not result in TAC exposures that create a risk of 10 in 1 million for stationary sources, or substantially increase the risk of exposure to TACs from mobile sources.

Mitigation Measures

MM AQ-1: Controlling fugitive dust as required by District Rule 403 and enforced by District staff.

MM AQ-2: Watering all exposed surfaces two times daily.

- Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

MM AQ-3: Covering or maintaining at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roads should be covered.

MM AQ-4: Using wet power vacuum street sweepers to remove any visitable trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

MM AQ-5: Limiting vehicle speeds on unpaved roads to 15 miles per hour (mph).

MM AQ-6: Requiring all roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binder are used.

Findings

The Project would have no additional project-specific environmental effects relating to Air Quality.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
2. BIOLOGICAL RESOURCES			
Would the project:			
A) Create a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected?	☐	☐	☒
B) Result in substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal species?	☐	☐	☒
C) Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands)?	☐	☐	☒

Environmental Setting

Prior to human development, the natural habitats within the region included perennial grasslands, riparian woodlands, oak woodlands, and a variety of wetlands including vernal pools, seasonal wetlands, freshwater marshes, ponds, streams, and rivers. Over the last 150 years, agriculture, irrigation, flood control, and urbanization have resulted in the loss or alteration of much of the natural habitat within the City limits. Non-native annual grasses have replaced the native perennial grasslands, many of the natural streams have been channelized, much of the riparian and oak woodlands have been cleared, and most of the marshes have been drained and converted to agricultural or urban uses.

Though the majority of the City is developed with residential, commercial, and other urban development, valuable plant and wildlife habitat still exists. These natural habitats are located primarily outside the city boundaries in the northern, southern and eastern portions of the City, but also occur along river and stream corridors and on a number of undeveloped parcels. Habitats that are present in the City include annual grasslands, riparian woodlands, oak woodlands, riverine, ponds, freshwater marshes, seasonal wetlands, and vernal pools. These habitats and their general locations are discussed briefly below.

The Project Site is comprised of multiple parcels that are predominantly vacant. Currently, there are two vacant buildings, 12 uncovered parking spaces on two of the parcels, and unpaved areas on the remaining parcels. Existing vegetation exists on the majority of the Project Site, specifically in the northwestern corner

and center of the Project Site. Due to the lack of on-site plantings, trees, and shrubs, as well as the adjacent pavement on-site, this vegetated area likely only provides habitat for common wildlife species such as squirrels.

A search of the CDFW California Natural Diversity Database (CNDDB) was performed in May 2023 to determine the records of sensitive plant and wildlife species within the project study area which included the Project Site. A total of 30 federally listed, State listed, or special-status plant and wildlife species were identified for within the Rio Linda quadrangle in which the Project Site is located.

Vegetation

The Project Site is partially developed with two vacant buildings and 12 uncovered parking spaces. Existing on-site vegetation is limited to dry vegetation and patches of annual grasslands that are scattered throughout the Project Site, as well as multiple bushes located along the northwestern corner and the eastern perimeter of the Project Site.

Wildlife

Due to the disturbed nature of the Project Site and surrounding areas, the potential for a diverse amount of wildlife is anticipated to be low. However, the disturbed grasslands on the Project Site could provide habitat for common wildlife species, such as squirrels and raccoons, among others. The absence of trees on the Project Site reduces the potential for the site to be used by many species of birds and other raptors for nesting.

Jurisdictional Waters

There are no navigable waters, interstate waters, or wetlands located on-site or adjacent to the Project Site.

Special-Status Species

The Project Site is located within the Rio Linda quadrangle, which encompasses the northeastern portion of the City of Sacramento. According to the CDFW CNDDB query database, a total of 24 special-status wildlife species and six special-status plant species have been identified within the Rio Linda quadrangle region. The Project Site is currently partially developed and is surrounded by developed land uses (i.e., single-family residences and commercial uses). As such, of the six special-status plant species identified, all species were excluded from further consideration due to habitat requirements (i.e., wetland, vernal pool, and/or grassland habitats, etc.) which are not present on-site. Of the 24 special-status wildlife species, 23 wildlife species were excluded from consideration due to habitat requirements. Unpaved parcels on-site may provide suitable habitat for the giant garter snake (*Thamnophis gigas*), a Threatened wildlife species

under the U.S. Fish and Wildlife Service (USFWS). However, according to the CDFWS, the Project Site is not located within a Predicted Habitat of the giant garter snake.[8]

Standards of Significance

For purposes of this environmental document, an impact would be significant if any of the following conditions or potential thereof, would result with implementation of the proposed project:

- Creation of a potential health hazard, or use, production or disposal of materials that would pose a hazard to plant or animal populations in the area affected;
- Substantial degradation of the quality of the environment, reduction of the habitat, reduction of population below self-sustaining levels of threatened or endangered species of plant or animal; or
- Affect other species of special concern to agencies or natural resource organizations (such as regulatory waters and wetlands).

For the purposes of this document, "special-status" has been defined to include those species, which are:

- Listed as endangered or threatened under the federal Endangered Species Act (or formally proposed for, or candidates for, listing);
- Listed as endangered or threatened under the California Endangered Species Act (or proposed for listing);
- Designated as endangered or rare, pursuant to California Fish and Game Code (Section 1901);
- Designated as fully protected, pursuant to California Fish and Game Code (Section 3511, 4700, or 5050);
- Designated as species of concern by U.S. Fish and Wildlife Service (USFWS), or as species of special concern to California Department of Fish and Game (CDFG);
- Plants or animals that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA).

8 California Department of Fish and Wildlife, "BIOS 6." Available online at: https://apps.wildlife.ca.gov/bios6/, accessed May 30, 2023.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.3 of the Master EIR evaluated the effects of the 2035 General Plan on biological resources within the City. The Master EIR identified potential impacts in terms of degradation of the quality of the environment or reduction of habitat or population below self-sustaining levels of special-status birds, through the loss of both nesting and foraging habitat.

Policies in the 2035 General Plan were identified as mitigating the effects of development that could occur under the provisions of the 2035 General Plan. Policy ER 2.1.5 calls for the City to preserve the ecological integrity of creek corridors and other riparian resources; Policy ER 2.1.10 requires the City to consider the potential impact on sensitive plants for each project and to require pre-construction surveys when appropriate; and Policy ER 2.1.11 requires the City to coordinate its actions with those of the California Department Fish and Wildlife, U.S. Fish and Wildlife Service, and other agencies in the protection of resources.

The Master EIR discussed biological resources in Chapter 4.3. The Master EIR concluded that policies in the general plan, combined with compliance with the California Endangered Species Act, Natomas Basin HCP (when applicable) and CEQA would minimize the impacts on special-status species to a less-than-significant level (see Impact 4.3-1), and that the general plan policies, along with similar compliance with local, state and federal regulation would reduce impacts to a less-than-significant level for habitat for special-status invertebrates, birds, amphibians and reptiles, mammals and fish (Impacts 4.3-3-6).

Given the prevalence of rivers and streams in the incorporated area, impacts to riparian habitat is a common concern. Riparian habitats are known to exist throughout the City, especially along the Sacramento and American rivers and their tributaries. The Master EIR discussed impacts of development adjacent to riparian habitat that could disturb wildlife species that rely on these areas for shelter and food and could also result in the degradation of these areas through the introduction of feral animals and contaminants that are typical of urban uses. The California Department of Fish and Wildlife (CDFW) regulates potential impacts on lakes, streams, and associated riparian (streamside or lakeside) vegetation through the issuance of Lake or Streambed Alteration Agreements (SAA) (per Fish and Game Code Section 1602) and provides guidance to the City as a resource agency. While there are no federal regulations that specifically mandate the protection of riparian vegetation, federal regulations set forth in Section 404 of the Clean Water Act address areas that potentially contain riparian-type vegetation, such as wetlands.

The General Plan calls for the City to preserve the ecological integrity of creek corridors, canals and drainage ditches that support riparian resources (Policy ER 2.1.5) and wetlands (Policy ER 2.1.6) and

requires habitat assessments and impact compensation for projects (Policy ER 2.1.10). has adopted a standard that requires coordination with state and federal agencies if a project has the potential to affect other species of special concern or habitats (including regulatory waters and wetlands) protected by agencies or natural resource organizations (Policy 2.1.11).

Implementation of 2035 General Plan Policy ER 2.1.5 would reduce the magnitude of potential impacts by requiring a 1:1 replacement of riparian habitat lost to development. While this would help mitigate impacts on riparian habitat, large open areas of riparian habitat used by wildlife could be lost and/or degraded directly and indirectly through development under the 2035 General Plan. Given the extent of urban development designated in the general plan, the preservation and/or restoration of riparian habitat would likely occur outside of the City limits. The Master EIR concluded that the permanent loss of riparian habitat would have a less-than-significant impact. (Impact 4.3-7)

Answers to Checklist Questions

A) No additional significant environmental effect.

Exposure of the public or the environment to hazardous materials could potentially occur through improper handling or use of hazardous materials or hazardous wastes during routine use, disposal, and/or transport of hazardous materials. The severity of these potential effects varies with the activity conducted, the concentration and type of hazardous materials or wastes present, and the proximity of sensitive receptors.

Operating as a new mixed-use building, the Project would not involve the handling, use or transport of hazardous materials or hazardous wastes. However, limited amounts of some hazardous materials could be used in the short-term construction phase of the Project and could expose construction workers and the general public, including standard construction materials (e.g., paints and solvents), vehicle fuel, and other hazardous materials. In the event of a release of hazardous material the Project would be required to notify the following State agencies under the following State statutes, respectively:

- Department of the California Highway Patrol: California Vehicle Code Section 23112.5;
- Office of Emergency Services and the California Public Utilities Commission: Public Utilities Code Section 7673, (PUC General Orders #22-B, 161);
- State Fire Marshal: Government Code Sections 51018
- Office Emergency Services: Water Codes Sections 13271, 13272; and

- Division of Occupational Safety and Health (Cal/OSHA): California Labor Code Section 6409.1 (b)10.

As such, the Project would have no additional significant environmental effect related to creating a potential significant health hazard associated with such.

B) No additional significant environmental effect.

The Project Site is partially developed with two vacant buildings and associated surface parking spaces. The remaining parcels on-site are unpaved and contain dry vegetation. Furthermore, the Project is located within a highly urbanized environment of the City and is surrounded by mostly residential and commercial uses. As noted above, existing conditions of the Project Site would not provide suitable habitat for the 29 of the 30 special-status wildlife and plant species that have been identified in the Project's CNDBB quadrangle. Additionally, while the Project Site currently may provide suitable habitat for the giant garter snake, the Project Site is not located within a Predicted Habitat of the giant garter snake. As such, the Project would not result in substantial degradation in the quality of the environment, reduction of the habitat, or the reduction of population of threatened or endangered species of plant or wildlife species below self-sustaining levels. The Project would result in no additional significant environmental effect.

C) No additional significant environmental effect.

As discussed, there are no existing water bodies, such as rivers, creeks, or wetlands located within the Project Site. As such, the Project would have no impact on sensitive protected wetlands and/or CDFW regulated waters and vegetation.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Biological Resources.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
3. CULTURAL RESOURCES			
Would the project:			
A) Cause a substantial adverse change in the significance of a historical or archaeological resource as defined in § 15064.5?	☐	☒	☐
B) Directly or indirectly destroy a unique paleontological resource?	☐	☒	☐
C) Disturb any human remains?	☐	☐	☒

Environmental Setting

The City of Sacramento and the surrounding area are known to have been occupied by Native American groups for thousands of years prior to settlement by non-Native peoples. Archaeological materials, including human burials, have been found throughout the city. Human burials outside of formal cemeteries often occur in prehistoric contexts. Areas of high sensitivity for archaeological resources, as identified in the 2035 General Plan Background Report, are located within close proximity to the Sacramento and American rivers and other watercourses.

The project site is not adjacent to these high or moderate sensitivity units shown in 2035 General Plan Background Report. The 2035 General Plan land use diagram designates a wide swath of land along the American River as Parks, which limits development and impacts on sensitive prehistoric resources. High sensitivity areas may be found in other areas related to the ancient flows of the rivers, with differing meanders than found today. Recent discoveries during infill construction in downtown Sacramento have shown that the downtown area is highly sensitive for both historic- and prehistoric-period archaeological resources. Native American burials and artifacts were found in 2005 during construction of the New City Hall and historic period archaeological resources are abundant downtown due to the evolving development of the area and, in part, to the raising of the surface street level in the 1860s and 1870s, which created basements out of the first floors of many buildings.

Currently, the Project Site consists of two vacant buildings that have been present on-site for more than 50 years.[9] As discussed in **Appendix B, Cultural Resources Evaluation**, one of the existing buildings on-site was constructed in 1961.

Standards of Significance

For purposes of this Initial Study, cultural resource impacts may be considered significant if construction and/or implementation of the proposed project would result in one or more of the following:

- Cause a substantial change in the significance of a historical or archaeological resource as defined in *CEQA Guidelines* Section 15064.5; or
- Directly or indirectly destroy a unique paleontological resource; or
- A substantial adverse change in the significance of such resources.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources. See Chapter 4.4.

General plan policies identified as reducing such effects call for identification of resources on project sites (Policy HCR 2.1.1), implementation of applicable laws and regulations (Policy HCR 2.1.2), early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10) and encouragement of adaptive reuse of historic resources (Policy HCR 2.1.14). Demolition of historic resources is deemed a last resort. (Policy HCR 2.1.15)

The Master EIR concluded that implementation of the 2035 General Plan would have a significant and unavoidable effect on historic resources and archaeological resources. (Impacts 4.4-1, 2)

Answers to Checklist Questions

A) Effect can be mitigated to less than significant.

As part of **Appendix B**, results of the California Historic Resources Information System (CHRIS) from the North Central Information Center (NCIC). The CHRIS search also included a review of the National

9 Historic Aerials, "Aerial Viewer." Available online at: https://www.historicaerials.com/viewer, accessed on May 30, 2023.

Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

The records search for the Project identified two existing buildings on-site, located at 3201 Marysville Boulevard. Both buildings were determined to have been constructed within the 1930s and 1940s. However, neither of the existing buildings or the associated properties are identified as a historic resource.[10] Furthermore, neither of the existing buildings or the associated properties are listed in either the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP). Furthermore, neither building was determined to possess the character defining features of an architectural style. As such, the existing buildings on-site would not be considered a historical resource under CEQA.

Given the extent of known cultural resources and patterns of local history, there is high potential for locating historic-period cultural resources within the proposed Project Site. As such, construction activities (i.e., excavating, grading) associated with the Project may result in an accidental discovery and disturbance of existing cultural resources. The Project Applicant would be required to implement Mitigation Measures to implement the appropriate steps that would address these impacts in the event that a cultural resource is discovered during Project Construction. Therefore, effects to historical or archaeological resources can be mitigated to less than significant levels.

B) Effect can be mitigated to less than significant.

Paleontological resources include fossil remains or traces of past life forms, including both vertebrate and invertebrate species, as well as plants. Paleontological resources are generally found within sedimentary rock formations.

The Project Site is located in a developed and urban area that has been highly disturbed. The Project Site is partially developed with two existing buildings and a surface parking lot, while the majority of the Project Site is undeveloped. As such, ground disturbing activities during construction could potentially impact undiscovered paleontological resources, which could be considered a significant impact. Mitigation Measures would be required to address the appropriate steps in the event that a paleontological resource is encountered during construction activities. Therefore, effects to paleontological resources can be mitigated to less than significant levels.

---

10 City of Sacramento, "Landmark, Historic Districts, and Cultural Resources Listings." Available online at: https://www.cityofsacramento.org/Community-Development/Planning/Urban-Design/Preservation/Sacramento-Register, accessed July 17, 2023.

C) No additional significant environmental effect.

No dedicated cemetery exists on the Project Site or in the vicinity of the Project. As the Project Site has been subject to past subsurface disturbance associated with grading and foundations; it is not anticipated that intact human remains would be encountered during construction activities. However, in the event that human remains are encountered, those remains would require proper treatment, in accordance with the with State of California Health and Safety Code Section 7050.5. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would also be implemented. Adherence to existing State laws would reduce impacts to less than significant levels.

Mitigation Measures

CR-1a: In the Event that Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.

If cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's City representative. Avoidance and preservation in place are the preferred manner of mitigating impacts to cultural resources. This will be accomplished, if feasible, by several alternative means, including:

- Planning construction to avoid archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.

- Recommendations for avoidance of cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project site to avoid cultural resources, modification of the design to eliminate or reduce impacts to cultural

resources, or modification or realignment to avoid highly significant features within a cultural resource.

- If the discovered cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.

- The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area".

If a cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of cultural resources:

- Each resource will be evaluated for California Register of Historical Resources-(CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable.

If a cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City. As part of the site investigation and resource assessment, the City and the archaeologist shall assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record.

CR-1b: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains.

If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the City the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to, or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq

Findings

All additional significant environmental effects of the project relating to Cultural Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
4. ENERGY AND MINERAL RESOURCES			
Would the project:			
A) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation?	☐	☐	☒
B) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒

Environmental Setting

Energy

The Project would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes policies (see 2035 General Plan Energy Resources Goal U 6.1.1) and related policies to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers and recruitment of businesses that research and promote energy conservation and efficiency.

The Master EIR discussed energy conservation and relevant general plan policies in section 6.3 (page 6-3). The discussion concluded that with implementation of the general plan policies and energy regulation (e.g., Title 24) development allowed in the general plan would not result in the inefficient, wasteful or unnecessary consumption of energy.

See also **Section 12**, below, discussing impacts related to energy. The Master EIR concluded that implementation of state regulation, coordination with energy providers and implementation of general plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level.

Environmental Setting

Sacramento Municipal Utility District (SMUD) is a community-owned and not-for-profit utility that provides electric services to 900 square miles, including most of Sacramento County (SMUD 2020). SMUD is the primary electricity supplier for the City of Sacramento and the Project Site.

Energy demand related to the Project would include energy directly consumed for space heating and cooling and proposed electric facilities and lighting. Indirect energy consumption would be associated with the generation of electricity at power plants. Transportation-related energy consumption includes the use of fuels and electricity to power cars, trucks, and public transportation. Energy would also be consumed by equipment and vehicles used during project construction and routine maintenance activities.

Energy Policy and Conservation Act, and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Under this act, the National Highway Traffic and Safety Administration is responsible for revising existing fuel economy standards and establishing new vehicle economy standards. The Corporate Average Fuel Economy program was established to determine vehicle manufacturers' compliance with the government's fuel economy standards. Three Energy Policy Acts have been passed, in 1992, 2005, and 2007, to reduce dependence on foreign petroleum, provide tax incentives for alternative fuels, and support energy conservation.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

State of California Energy Efficiency Action Plan

The 2019 California Energy Efficiency Action Plan has three primary goals for the state: double energy efficiency savings by 2030 relative to a 2015 base year (per SB 350), expand energy efficiency in low-income and disadvantaged communities, and reduce greenhouse gas emissions from buildings. This plan provides guiding principles and recommendations on how the state would achieve those goals. These recommendations include:

- identifying funding sources that support energy efficiency programs,
- identifying opportunities to improve energy efficiency through data analysis,
- using program designs as a way to encourage increased energy efficiency on the consumer end,
- improving energy efficiency through workforce education and training, and
- supporting rulemaking and programs that incorporate energy demand flexibility and building decarbonization. (CEC 2019)

California Green Building Standards

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2019 California Energy Code was adopted by CEC on May 9, 2018, and applies to projects constructed after January 1, 2020. The 2019 California Energy Code is designed to move the State closer to its zero-net energy goals for new residential development. It does so by requiring all new residences to install enough renewable energy to offset all the electricity needs of each residential unit (California Code of Regulations (CCR), Title 24, Part 6, Section 150.1(c)4). CEC estimates that the combination of mandatory on-site renewable energy and prescriptively required energy efficiency standards will result in a 53 percent reduction in new residential construction as compared to the 2016 California Energy Code. Non-residential buildings are anticipated to reduce energy consumption by 30 percent as compared to the 2016 California Energy Code primarily through prescriptive requirements for high-efficiency lighting (CEC 2018). The Energy Code is enforced through the local plan check and building permit process. Local government

agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided that these standards exceed those provided in the California Energy Code.

Transportation-Related Regulations

Various regulatory and planning efforts are aimed at reducing dependency on fossil fuels, increasing the use of alternative fuels, and improving California's vehicle fleet. Senate Bill (SB) 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. CARB, in consultation with the metropolitan planning organizations, provides each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in their respective regions for 2020 and 2035.

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), CEC and the CARB prepared and adopted a joint agency report in 2003, Reducing California's Petroleum Dependence. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003).

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare the State Alternative Fuels Plan to increase the use of alternative fuels in California.

In January 2012, CARB approved the Advanced Clean Cars program which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of zero-emission vehicles, into a single package of standards for vehicle model years 2017 through 2025. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025.

On August 2, 2018, the National Highway Traffic Safety Administration (NHTSA and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule). Part One of the SAFE Rule revokes a waiver granted by EPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by EPA for the explicit purpose of GHG emission reduction, and indirectly, criteria air pollutant and ozone precursor emission reduction. On March 31, 2020, Part Two of the SAFE Rule was published and would amend existing CAFE and tailpipe CO_2 emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026.

GHG Reduction Regulations

Several regulatory measures such as AB 32 and the Climate Change Scoping Plan, EO B-30-15, SB 32, and AB 197 were enacted to reduce GHGs and have the co-benefit of reducing California's dependency on fossil fuels and making land use development and transportation systems more energy efficient.

Renewable Energy Regulations

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California. SB X1-2 mandates that renewables from these sources make up at least 50 percent of the total renewable energy for the 2011-2013 compliance period, at least 65 percent for the 2014-2016 compliance period, and at least 75 percent for 2016 and beyond.

SB 100, signed in September 2018, requires that all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, supply 44 percent of retail sales from renewable resources by December 31, 2024, 50 percent of all electricity sold by December 31, 2026, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. The law also requires that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century.

Summary of Analysis Under the 2035 General Plan Master EIR and Applicable general plan policies

Structures built would be subject to Titles 20 and 24 of the California Code of Regulations, which reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings. The 2035 General Plan includes policies (see 2035 General Plan Energy Resources Goal U 6.1.1) and related policies to encourage energy-efficient technology by offering rebates and other incentives to commercial and residential developers, coordination with local utility providers and recruitment of businesses that research and promote energy conservation and efficiency.

The Master EIR discussed energy conservation and relevant General Plan policies in section 6.3 (page 6-3). The discussion concluded that with implementation of the General Plan policies and energy regulation (e.g., Title 24) development allowed in the General Plan would not result in the inefficient, wasteful or unnecessary consumption of energy.

See also Section 12, below, discussing impacts related to energy. The Master EIR concluded that implementation of state regulation, coordination with energy providers and implementation of General Plan policies would reduce the potential impacts from construction of new energy production or transmission facilities to a less-than-significant level.

Sacramento Climate Action Plan

The Sacramento CAP was adopted on February 14, 2012, by the Sacramento City Council and was incorporated into the 2035 General Plan. The Sacramento CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with transportation and land use, energy, water, waste management and recycling, agriculture, and open space.

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if the project would:

- result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation; and/or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Answers to checklist questions

A) No additional significant environmental effect.

Neither federal or State law nor the *State CEQA Guidelines* establish thresholds that define when energy consumption is considered wasteful, inefficient and unnecessary. Compliance with CCR Title 24 Energy Efficiency Standards would result in energy-efficient buildings. However, compliance with building codes does not adequately address all potential energy impacts during construction and operation. For example, energy would be required to transport people and goods to and from the project site. Energy use is discussed by anticipated use type below.

Construction

Construction activities would include the consumption in the form of gasoline and diesel fuel in order to power construction worker vehicle trips, hauling and materials delivery truck trips, and operation of construction equipment. Energy in the form of electricity may also be consumed by some pieces of construction equipment, such as power tools, lighting, etc.; however, the amount of consumed electricity would be relatively minimal. Indirect energy use would include the energy required to make the materials and components used in construction.

Construction equipment would be maintained to applicable standards, and construction activities and associated fuel consumption and energy use would be temporary and typical of construction sites. The Project Applicant would use fuel-efficient equipment consistent with State and federal regulations, such as the fuel efficiency regulations outlined in Title 24, Assembly Bill 32 (AB 32), which regulates energy resources and fuel consumption and California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Therefore, construction activities associated with the Project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational

The Project would include the development of a new mixed-use building that would include residential units and commercial/retail uses. The Project would comply with the mandatory requirements set forth in the California Green Building Standards Code (CBSC) related to energy efficiency, water efficiency and conservation, and material conservation and resource efficiency for new non-residential buildings.

Additionally, SMUD is required to comply with the State's Renewables Portfolio Standard, mandating that investor-owned utilities, electric service providers, and community choice aggregators must meet a 33 percent total procurement of eligible renewable energy resources by 2020 and 60 percent total procurement by 2030. This ensures that a portion of the electricity consumed during project operations would be generated from renewable resources.

Energy would also be consumed as a result of vehicle trips. Thus, Project operations would result in an increase in the consumption of petroleum-based fuels related to vehicular travel to and from the Project Site. The majority of the Project's vehicle fleet would consist of light-duty automobiles and light-duty trucks, which are subject to state fuel efficiency standards, such as the Low Carbon Fuel Standard (LCFS) and Low-Emission Vehicle Program Standards. The Low Carbon Fuel Standard, in part, aims to reduce fuel consumption and providers of transportation fuels must demonstrate that the mix of fuels they supply for use in California meets the LCFS carbon intensity standards for each annual compliance period.

Mineral Resources

According to the California Department of Conservation, Division of Mine Reclamation, there are no active mines within the City.[11] Although there are known regional mineral resources in Sacramento County, the Project Site is not located within an area that is known to contain regionally significant mineral resources.[12] Further, the Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Thus, no impacts would occur.

B) No additional significant environmental effect.

The Project would be designed in a manner that is consistent with the Sacramento CAP. The Project would be required to demonstrate compliance with Titles 20 and 24 of the California Code of Regulations, which serve to reduce demand for electrical energy by implementing energy-efficient standards for residential and non-residential buildings.

---

11 California Department of Conservation, "Mines Online." Available online at: https://maps.conservation.ca.gov/mol/index.html, accessed on May 12, 2023.

12 California Department of Conservation, *Mineral Land Classification Map of Concrete Aggregate in the Greater Sacramento Area Production-Consumption Region*. Available online at: https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Reports/SR_245-MLC-_SacramentoPCR-2018-Plate01-a11y.pdf , accessed on May 12, 2023.

Furthermore, according to the California Department of Conservation, Division of Mine Reclamation, there are no active mines within the City.[13] Although there are known regional mineral resources in Sacramento County, the Project Site is not located within an area that is known to contain regionally significant mineral resources.[14] Therefore, no additional significant environmental effect would occur.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Energy.

13 California Department of Conservation, "Mines Online." Available online at: https://maps.conservation.ca.gov/mol/index.html, accessed on May 12, 2023.

14 California Department of Conservation, *Mineral Land Classification Map of Concrete Aggregate in the Greater Sacramento Area Production-Consumption Region*. Available online at: https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Reports/SR_245-MLC-_SacramentoPCR-2018-Plate01-a11y.pdf, accessed on May 12, 2023.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
5. GEOLOGY AND SOILS			
A) Would the project allow a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards?	☐	☐	☒

Environmental Setting

Regional Geology

The Project Site is located within the Sacramento Valley and lies centrally in the Great Valley geomorphic province of California. The Sacramento Valley forms the northern third of the Great Valley, which fills a northwest-trending structural depression bounded on the west by the Great Valley Fault Zone and the northern Coast Range, and to the east by the northern Sierra Nevada and the Foothills Fault Zone. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, primarily composed of sediments from the Sierra Nevada and the Coast Ranges, which were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary Cenozoic deposits underlie the Quaternary alluvium.

Topography

According to the Master EIR for the 2035 General Plan, the City of Sacramento is relatively flat. As such, slope stability, landslide, and erosion hazards do not present substantial hazards to people and property in the City.

Project Site Geology

According to the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), the Project Site consists of San Joaquin-Urban land complex soil series, 0 to 3 percent slopes.[15] San Joaquin-Urban land complex characteristics include being moderately well drained, more than 80 inches to water table, zero frequency of flooding or ponding, and very low water capacity. Fine sandy loam occurs from 0 to 13 inches, sandy clay loam from 13 to 30 inches, clay from 30 to 35 inches, indurated 35 to 60 inches, and stratified sandy loam from 60 to 67 inches.

[15] United States Department of Agriculture, Natural Resources Conservation Service, "WebSoil Survey." Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed May 30, 2023.

Fault and Seismicity

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The Act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within the Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault. The Project Site is not located within a Alquist-Priolo Earthquake Fault Zone.[16]

According to the Master EIR 2035 General Plan, there are no known active faults in the City and the Sacramento region. The closest active fault to the City of Sacramento is the Foothills fault system about 23 miles east of the City. The maximum magnitude earthquake from the foothills fault system is anticipated to be magnitude 6.5. According to the Public Health and Safety Element of the 2035 General Plan, the San Andreas and Calaveras faults are considered to pose the greatest earthquake threat to the City.[17] Both faults could cause shaking within the City to an intensity of 5 to 6 on the Modified Mercalli intensity scale.

Surface Fault Rupture And Ground Shaking

The Project Site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards.[18] As such, active or potentially active faults are not known to pass directly beneath the site.

Landslides

There are no known landslide zones located near the Project Site.[19] Furthermore, due to the area's relatively flat topography, the Project Site has low potential for a landslide to occur.

---

16 California Department of Conservation, "Earthquake Zones of Required Investigation." Available online at: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed on May 30, 2023

17 City of Sacramento, *2035 General Plan, Public Health and Safety*, March 2015. Available online at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-7---Public-Health-and-Safety.pdf?la=en, accessed May 30, 2023.

18 California Department of Conservation, "Fault Activity Map of California." Available online at: https://maps.conservation.ca.gov/cgs/fam/, accessed May 30, 2023.

19 California Department of Conservation, "Earthquake Zones of Required Investigation." Available online at: https://maps.conservation.ca.gov/cgs/eqzapp/app/, accessed on May 30, 2023.

Expansive Soils

Expansive soils are defined as soils possessing clay particles that react to moisture changes by shrinking (when dry) or swelling (when wet). As stated, the Project Site is underlain by San Joaquin-Urban land complex, 0 to 3 percent slope, which generally consist of sandy loam and clay. These materials have a low potential for soil expansion.[20]

Liquefaction

Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: (1) shallow groundwater; (2) low-density, fine, clean sandy soils; and (3) high intensity ground motion. According to the California Department of Conservation, the Project Site is not located within an identified liquefaction zone.[21]

Subsidence

Subsidence occurs when large amounts of groundwater have been withdrawn from certain types of rocks, such as fine-grained sediments. In California, large areas of land subsidence were first documented by United States Geological Survey (USGS) scientists in the first half of the 20th century. Most of this subsidence was a result of excessive groundwater pumping. The Project Site is not within a subsidence area according to the USGS.[22]

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if it allows a project to be built that will either introduce geologic or seismic hazards by allowing the construction of the project on such a site without protection against those hazards.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.5 of the Master EIR evaluated the potential effects related to seismic hazards, underlying soil characteristics, slope stability, erosion, existing mineral resources and paleontological resources in the City.

---

20 2022 California Building Code. Available online at: https://codes.iccsafe.org/content/CABC2022P1

21 California Department of Conservation, "Fault Activity Map of California." Available online at: https://maps.conservation.ca.gov/cgs/fam/, accessed May 30, 2023.

22 U.S. Geological Survey, "Areas of Land Subsidence in California." Available online at: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html , accessed May 30, 2023.

Implementation of identified policies in the 2035 General Plan reduced all effects to a less-than-significant level. Policy EC 1.1.1 requires regular review of the City's seismic and geologic safety standards, and Policy EC 1.1.2 requires geotechnical investigations for project sites to identify and respond to geologic hazards, when present.

Answers to Checklist Questions

A) No additional significant environmental effect.

The Project Site is located in an area that is topographically flat. Therefore, there is little to no potential for seismically induced or soil failure landslides on-site. Furthermore, the Project Site is not located in an Alquist-Priolo Fault Zone; therefore, the potential for fault rupture on the Project Site is considered to be low. The Foothills Fault System is the closest active fault to the Project Site, over 25 miles away. As stated above, the Project Site is not located within a state-designated liquefaction zone. Thus, the potential for liquefaction to occur on-site during a seismic event is low.

The Project would be subject to the 2022 California Building Code (CBC), which provides minimum standards for building design in the State of California. Specifically, the Project would be required to demonstrate compliance with all applicable requirements outlined in Chapter 16 and Chapter 18 of the CBC. Chapter 16 includes regulations and building standards governing seismically resistant construction and construction techniques to protect people and property from hazards associated with excavation cave-ins and falling debris/construction materials. Chapter 18 provides regulations regarding site demolition, excavations, foundations, retaining walls, and grading, including (but not limited to) requirements for seismically resistant design, foundation investigation, stable cut and fill slopes, and excavation, shoring, and trenching. Compliance with these standards of the CBC would be checked by the City during the building permit process. Thus, adherence to state and local regulations would ensure that the Project would have no additional significant environmental effect.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Geology and Soils.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
6. GREENHOUSE GAS EMISSIONS			
Would the project:			
A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒
B) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒

Environmental Setting

The City of Sacramento is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is about 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the "Delta breeze" that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates

the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

Greenhouse Gases

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHGs), play a critical role in determining the earth's surface temperature. GHGs are responsible for "trapping" solar radiation in the earth's atmosphere, a phenomenon known as the greenhouse effect. Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. Emissions of GHGs contributing to global climate change are attributable, in large part, to human activities associated with on-road and off-road transportation, industrial/manufacturing, electricity generation by utilities and consumption by end users, residential and commercial on-site fuel usage, and agriculture and forestry. Emissions of CO_2 are, largely, byproducts of fossil fuel combustion.

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

Several regulations currently exist related to GHG emissions, predominantly Assembly Bill (AB) 32, Executive Order S-3-05, and Senate Bill (SB) 32. AB 32 requires that Statewide GHG emissions be reduced to 1990 levels by 2020. Executive Order S-3-05 established the GHG emission reduction target for the State to reduce to the 2000 level by 2010, the 1990 level by 2020 (AB 32), 40 percent below the 1990 level by 2030, and to 80 percent below the 1990 level by 2050 (SB 32).

To meet the statewide GHG emission targets, the City adopted the City of Sacramento Climate Action Plan (CAP) on February 14, 2012, to comply with AB 32. The CAP identified how the City and the broader community could reduce Sacramento's GHG emissions and included reduction targets, strategies, and specific actions. In 2015, the City of Sacramento adopted the 2035 General Plan Update. The update incorporated measures and actions from the CAP into Appendix B, General Plan CAP Policies and Programs, which includes citywide policies and programs that are supportive of reducing GHG emissions

Standards of Significance

A project is considered to have a significant effect relating to greenhouse gas emissions if it fails to satisfy the requirements of the City's Climate Action Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR found that greenhouse gas emissions that would be generated by development consistent with the 2035 General Plan would contribute to climate change on a cumulative basis. Policies of the General Plan identified in the Master EIR that would reduce construction related GHG emissions include: ER 6.1.2, ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 Climate Action Plan (CAP), which demonstrates compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 also commits the City to evaluate the feasibility and effectiveness of new GHG emissions reduction measures in view of the City's longer-term GHG emission reduction goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference in this Initial Study (*State CEQA Guidelines* Section 15150).

The Master EIR identified numerous policies included in the 2035 General Plan that addressed greenhouse gas emissions and climate change. See Draft Master EIR, Chapter 4.14, and pages 4.14-1 et seq.

Answers to Checklist Questions

A) No additional significant environmental effect.

The Project would generate GHG emissions during temporary, short-term construction activities such as demolition, grading, running of construction equipment engines, movement of on-site heavy-duty construction vehicles, hauling of materials to and from the site, asphalt paving, and construction worker motor vehicle trips.

With the use of CalEEMod, GHG emissions associated with Project construction were calculated from off-road equipment usage, hauling vehicles, delivery, and worker trips to and from the site. According to the CalEEMod calculations (see the Project's Air Quality Report contained in **Appendix A** to this Initial Study), the total GHG construction emissions would be approximately 504 MT CO2e. The SMAQMD has

established a threshold of 1,100 metric tons of CO2e per year during construction.[23] Given that the Project does not exceed this threshold, impacts related to GHG emissions during construction would be less than significant.

With respect to operational GHG emissions, the SMAQMD CEQA Guide states that projects shall demonstrate consistency with the Climate Change Scoping Plan by implementing applicable BMPs. The SMAQMD states all projects must implement Tier 1 BMPs, which include: BMP 1 - projects shall be designed and constructed without natural gas infrastructure; and BMP 2 - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready. The SMAQMD also states projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3 - residential projects shall achieve a 15% reduction in vehicle miles traveled per resident and office projects shall achieve a 15% reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743).

The Project is designed to not include natural gas infrastructure, the Project will meet CalGreen Tier 2 standards, and the Project includes EV ready parking spaces. As such, the applicable threshold of significance is 1,100 metric tons/year of CO2e. As detailed in **Appendix A** to the Project's Air Quality Report, the Project would generate approximately 238 metric tons/year of CO2e (for non-mobile sources of GHGs). This operational GHG estimate is consistent with Section 15183.5(c) (Special Situations) of the CEQA Guidelines, which states a project does not require an analysis of its operational GHG emissions resulting from cars and light duty trucks if the project meets the definition of a transit priority project. Consistent with Section 21155 of the Public Resources Code, the Project is a transit priority project as it contains at least 50 percent residential use, provides a minimum net density of at least 20 dwelling units per acre, and is within one-half mile of a major transit stop or high-quality transit corridor.[24] The Project is also consistent with its General Plan designation, density, building intensity, and is consistent with the Sacramento Council of Governments (SACOG) MTP/SCS. The Project satisfies all of the requirements provided in Sections 21155 of the Public Resources Code. In accordance with these *CEQA Guidelines* and Statutes, the Project's generation of 238 metric tons/year of CO2e is below the SMAQMD operational GHG

---

23 Sacramento Metropolitan Air Quality Management District, *SMAQMD Thresholds of Significance Table*, April 2020. Available online at: https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf, accessed November 3, 2023.

24 As mentioned in the Project Description, the Project Site is located approximately 0.49 miles from the Sacramento Regional Transit (SacRT) Blue Line Marconi/Arcade Light Rail Station. In addition, the north bound bus stop for the SacRT 86 bus line is located approximately 50 feet east of the Project Site, across Marysville Boulevard; and the east bound bus stop for the SacRT 86 bus line is located approximately 250 feet from the Project Site.

threshold. As such, the Project would not be required to implement BMP 3, and operational GHG impacts would be less than significant.

B) No additional significant environmental effect.

The Sacramento Climate Action Plan is organized by seven overarching strategies that represent the primary ways the City will reduce GHG emissions and adapt to expected climate change impacts. The seven strategies and their subsequent measures are: sustainable land use, mobility and connection, energy efficiency and renewable energy, waste reduction and recycling, water conservation and water efficiency, climate change adaptation, and community involvement and empowerment. The Project is an infill, mixed-use multifamily housing development that will not include natural gas infrastructure, be built to comply with Titles 20 and 24 of the California Code of Regulations units and includes EV ready parking spaces. The Project implements the strategies established in the City's CAP. Therefore, the Project would satisfy the requirements of the City's CAP and would not be considered to have a significant effect relating to greenhouse gas emissions. Furthermore, the Project is consistent with policies aimed at reducing greenhouse gases from the General Plan as well as the SACOG MTP/SCS. The Project would not be in conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Mitigation Measures

All projects must implement Tier 1 BMPs (BMP 1 & BMP 2):

MM GHG-1:

- BMP 1: All projects shall be designed and constructed without natural gas infrastructure.
- BMP 2: Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall be electric vehicle ready.

Findings

The Project would have no additional project-specific environmental effects relating to Greenhouse Gases.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
7. HAZARDS			
Would the project:			
A) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities?	☐	☒	☐
B) Expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials?	☐	☐	☒
C) Expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities?	☐	☒	☐

Environmental Setting

Existing Structures

The Project Site is partially developed with two vacant buildings located on the south end of the Project Site. Given that these buildings were constructed prior to 1960, there is the potential for asbestos-containing materials (ACMs) and lead-based paint (LBP), as well as other potential hazardous materials to be present in association with the building materials.[25]

Soil and Groundwater Conditions

In April 2022, a leaking underground storage tank (LUST) at 3201 Marysville Boulevard was reported to the State Water Resources Control Board (SWRB). The LUST resulted in an accidental release of TPHg, TPHd, PCBs, and volatile organic compounds (VOCs).[26] Although the Project Site was vacant at the time of this discovery, the previous uses included a saddlery (1947), auto repair shop (1958-1995), and recycling center (1996-2017). All USTs were reported to have been removed from the existing parcel between 1994 and 1996. However, concentrations of contaminants such as petroleum hydrocarbons in the gasoline, diesel, and motor oil ranges, volatile organic compounds, and semi-volatile organic compounds were

25 Historic Aerials, "Aerial Viewer." Available online at: https://www.historicaerials.com/viewer , accessed on May 30, 2023.

26 SCA Environmental, Inc., *Limited Phase II Environmental Site Assessment Report 3201 Marysville Blvd Sacramento, CA, 95815*. March 25, 2022.

identified in the soil on-site at a depth of 10 to 15 feet below ground surface. In February 2023, a Work Plan prepared for the LUST case recommended that the property owner excavate two test pit areas in which these contaminants were localized.[27] However, a Supplemental Site Investigation Report for the Project Site reported that the soil within the two test pit areas and a third test pit were excavated for the removal of contained contaminated soil. However, soil in other areas of the Project Site is suspected to remain contaminated with hydraulic oil. Further, investigation reports state that the groundwater underneath the Project Site were not sampled and are suspected to be contaminated with gasoline.[28]

Proximity to Schools

The closest school to the Project Site is Hagginwood Elementary School, located approximately 0.18 miles southeast of the Project Site at 1418 Palo Verde Avenue.

Federal regulations and regulations adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD) apply to the identification and treatment of hazardous materials during demolition and construction activities. Failure to comply with these regulations respecting asbestos may result in a Notice of Violation being issued by the AQMD and civil penalties under state and/or federal law, in addition to possible action by U.S. EPA under federal law.

Federal law covers a number of different activities involving asbestos, including demolition and renovation of structures (40 CFR § 61.145).

SMAQMD Rule 902 and Commercial Structures

The work practices and administrative requirements of Rule 902 apply to all commercial renovations and demolitions where the amount of Regulated Asbestos-Containing Material (RACM) is greater than:

- 260 lineal feet of RACM on pipes, or
- 160 square feet of RACM on other facility components, or
- 35 cubic feet of RACM that could not be measured otherwise.

---

27 SCA Environmental, *Work Plan – Test Pit Explorations 3201 Marysville Boulevard, Sacramento, CA*. Available online at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/8327015578/T10000018696.PDF, accessed May 30, 2023.

28 SCA Environmental, *Supplemental Site Investigation Report – Test Pit Explorations 3201 Marysville Boulevard, Sacramento, CA- Local Oversight Program Site No. G159; RO0001736*. Available online at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/1676299691/T10000018696.PDF, accessed May 30, 2023.

The administrative requirements of Rule 902 apply to any demolition of commercial structures, regardless of the amount of RACM. To determine the amount of RACM in a structure, Rule 902 requires that a survey be conducted prior to demolition or renovation unless:

- the structure is otherwise exempt from the rule, or
- any material that has a propensity to contain asbestos (so-called "suspect material") is treated as if it is RACM.

Surveys must be done by a licensed asbestos consultant and require laboratory analysis. Asbestos consultants are listed in the phone book under "Asbestos Consultants." Large industrial facilities may use non-licensed employees if those employees are trained by the U.S. EPA. Questions regarding the use of non-licensed employees should be directed to the AQMD.

Standards of Significance

For the purposes of this Initial Study, an impact is considered significant if the Project would:

- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated soil during construction activities;
- expose people (e.g., residents, pedestrians, construction workers) to asbestos-containing materials or other hazardous materials; or
- expose people (e.g., residents, pedestrians, construction workers) to existing contaminated groundwater during dewatering activities.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated effects of development on hazardous materials, emergency response and aircraft crash hazards. See Chapter 4.6, Implementation of the General Plan may result in the exposure of people to hazards and hazardous materials during construction activities, and exposure of people to hazards and hazardous materials during the life of the General Plan. Impacts related to construction activities and operations were found to be less than significant. Policies included in the 2035 General Plan, including PHS 3.1.1 (investigation of sites for contamination) and PHS 3.1.2 (preparation of hazardous materials actions plans when appropriate) were effective in reducing the identified impacts.

Answers to Checklist Questions

A and C) No additional significant environmental effect.

As discussed above, the Project Site currently has an open LUST case. As of April 2023, soils and groundwater present at the 3201 Marysville Boulevard property (located southwestern portion of the Project Site) may be contaminated with hydraulic oil and gasoline, respectively. State records confirm that the impacted underground storage tanks have been removed and no concentration of TPHg, TPHd, PCBs, and VOCs contaminants were found within the surrounding soils.[29] However, SWRCB has identified potential contamination to the underlying aquifers on-site from the LUST, and no records of case closures have been submitted to the State Water Resources Control Board (SWRCB). As such, construction activities for the Project could encounter such materials during excavation, transport, and dewatering activities.

The Project Applicant must ensure that the potential groundwater contamination of the Project Site is remediated prior to initiating construction activities. The Project is currently being remediated with oversight by the Sacramento County Environmental Management Department (EMD) and Central Valley Regional Water Quality Control Board (RWQCB), and the Project Site would be remediated to residential standards. Accordingly, the Project Applicant would coordinate with the Sacramento County EMD and RWQCB to obtain an approved remediation plan and a Site Closure Report for the open LUST Case on site.

In the event that additional remediation of the Project Site is required, the Project Applicant would be required to notify the following State agencies under the following State statutes respectively:

- Department of the California Highway Patrol: California Vehicle Code Section 23112.5;
- Office of Emergency Services and the California Public Utilities Commission: Public Utilities Code Section 7673, (PUC General Orders #22-B, 161);
- State Fire Marshal: Government Code Sections 51018
- Office Emergency Services: Water Codes Sections 13271, 13272; and
- Division of Occupational Safety and Health (Cal/OSHA): California Labor Code Section 6409.1 (b)10.

[29] Ramcon Engineering and Environmental Contracting, *Underground Tank Removal Report*, June 19, 2023. Available online at: https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/8850248038/RO0001736_UST_061923.pdf, accessed July 31, 2023.

The appropriate regional and local agencies would also be notified, such as the SFD and the County of Sacramento Environmental Management Department.

In conclusion, the potential soil contamination from the on-site LUST will be remediated, and to ensure no accidental exposure to existing contaminated soil and/or groundwater during construction isor occupation of the site mitigation measure HAZ-1 will be implemented. The Project Applicant would obtain a remediation plan and case closure letter to ensure that any subsequent aquifer contamination from the LUST would no longer be present on-site. Furthermore, the Project Applicant would coordinate with the appropriate state, regional, and local agencies in the event that further remedial action is needed. As such, the Project would not have significant effects in this regard.

B) No additional significant environmental effect.

Given the age of the existing vacant buildings on-site, there is potential for asbestos-containing materials (ACMs) and lead-based paint (LBP), as well as other potential hazardous materials to be present in association with the building materials of these buildings. As such, demolition of these buildings could potentially expose construction personnel to ACMs or LBPs. Demolition activities that could potentially result in the release of ACMs or LBPs would be required to be conducted in accordance with the U.S. EPA's National Emission Standards for Hazardous Air Pollutants. These standards mandate that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition. Compliance with building standards, regulations, and General Plan policies would ensure that construction and operational impacts related to hazards and hazardous materials would be less than significant.

Mitigation Measures

HAZ-1:The Project Applicant shall provide the City documentation of compliance with the Sacramento County EMD & RWQCB requirements for clean-up of the subject site, which may be in the form of Case Closure documentation and/or No Further Action letter(s) outlining that the site is clear for residential mixed-use development.

Findings

All additional significant environmental effects of the project relating to Hazards can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
8. HYDROLOGY AND WATER QUALITY			
Would the project:			
A) Substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the project?	☐	☐	☒
B) Substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood?	☐	☐	☒

Environmental Setting

Regional Rivers

Sacramento River: The Sacramento River is located approximately 6.87 miles west of the Project Site. The Sacramento River is considered to be the State's and extends over 300 miles from the Klamath Mountains in the north to the Sacramento-San Joaquin Delta.

American River: The American River is located approximately 2.9 miles south of the Project Site. The American River is a 30-mile-long river that runs from the Sierra Nevada Mountain range to its confluence with the Sacramento River in downtown Sacramento. The Sacramento River is part of the San Francisco Bay watershed. The river is fed by the melting snowpack of the Sierra Nevada and its many headwaters and tributaries, including the North Fork American River, Middle Fork American River, and South Fork American River.

Local Creeks

Arcade Creek: Arcade Creek is located approximately 215 feet north of the Project Site and is the closest creek to the Project. Arcade Creek is an approximate 3.4-mile-long creek that runs from the Business Loop I-80 to the Natomas East Main Drainage Canal. The creek runs adjacent to several single-family residences and commercial uses.

Steelhead Creek: Steelhead Creek is located approximately 1.9 miles west of the Project Site. Steelhead Creek is a 12.30-mile-long creek that runs south from the Elverta area in north Sacramento County through

the Northgate community. The creek joins Arcade Creek in a confluence in the Wills Acres community and then continues to flow south to the American River Parkway.

Drainage

The Project Site is within the City's Drainage Basin 158.[30] The Basin 158 watershed covers several acres and conveys runoff through an underground pipe system.

Groundwater

The City of Sacramento generally utilizes groundwater as the secondary drinking water standards for municipal use.[31] This groundwater is produced from the existing ground water wells within both the North American Groundwater Basin and South American Groundwater Basin. Groundwater supply is projected to increase between 2025 and 2045 with 23 of the 27 existing groundwater wells operating. The Project Site is located in the North American Groundwater Subbasin with two groundwater wells located within a 0.5-mile distance from the Project Site.[32] According to the City's Urban Water Management Plan (UWMP), the total pumping capacity of the wells is about 23 million gallons per day (MGD). Assuming that only 60 to 90 percent of the wells are available at any given time, the total pumping capacity is about 14 to 20 MGD.

Flood Zones

According to the Federal Emergency Management Agency (FEMA), the Project Site is located within an area designated as a shaded Zone X. This zone applies to areas of 0.2 percent annual chance flood, areas of one percent annual chance flood with average depths of less than one foot, or with drainage areas less than one square mile, and areas protected by levees from one percent annual chance flood.[33]

---

30 City of Sacramento, "Drainage Basins." Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Specs-Drawings/DRAINAGE_BASINS_11-2015.pdf?la=en, accessed May 31, 2023.

31 City of Sacramento, *General Plan Master EIR*, 2014

32 City of Sacramento, *2020 Urban Water Management Plan*, May 2021. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Reports/R---038---City-of-Sacramento-Draft-2020-UWMP---05-18-21.pdf?la=en, accessed May 31, 2023.

33 Federal Emergency Management Agency (FEMA), "Flood Map for 06067C0068H," Available online at: https://msc.fema.gov/portal/downloadProduct?productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06067C0068H, accessed May 31, 2023.

Standards of Significance

For purposes of this Initial Study, impacts to hydrology and water quality may be considered significant if construction and/or implementation of the Project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan Master EIR:

- substantially degrade water quality and violate any water quality objectives set by the State Water Resources Control Board, due to increases in sediments and other contaminants generated by construction and/or development of the Specific Plan or
- substantially increase the exposure of people and/or property to the risk of injury and damage in the event of a 100-year flood.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.7 of the Master EIR evaluated the potential effects of the 2035 General Plan as they relate to surface water, groundwater, flooding, stormwater and water quality. Potential effects include water quality degradation due to construction activities (Impacts 4.7-1, 4.7-2), and exposure of people to flood risks (Impacts 4.7-3). Policies included in the 2035 General Plan, including a directive for regional cooperation (Policies ER 1.1.2, EC 2.1.1), comprehensive flood management (Policy EC 2.1.23), and construction of adequate drainage facilities with new development (Policy ER 1.1.1 to ER 1.1.10) were identified that the Master EIR concluded would reduce all impacts to a less-than-significant level.

Answers to Checklist Questions

A) No additional significant environmental effect.

Construction Activities

Section 402 of the Clean Water Act (CWA) includes regulations established by the U.S. EPA under the National Pollutant Discharge Elimination System (NPDES) program to control direct stormwater discharges. In the State of California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The NPDES program regulates industrial pollutant discharges, which include construction activities. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City of Sacramento is located within the jurisdiction of the Central Regional Water Quality Control Boards (CVWQCB). Under the NPDES program, construction

activities that disturb more than one acre of land would be required to obtain a Construction General Permit Order 2009-0009-DWQ.

The City of Sacramento's Grading Ordinance requires development projects to comply with the requirements of the City's Stormwater Quality Improvement Plan (SQIP). The SQIP outlines the priorities, key elements, strategies, and evaluation methods of the City's Stormwater Management Program The City's SQIP contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This General Construction Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutant to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Construction activities associated with the Project would involve demolition and grading disturbances that would disturb more than one acre of land. As such, the Project Applicant would be required to obtain coverage under the NPDES Construction General Permit by first preparing an SWPPP for the Project. The SWPPP may contain site plans of the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the Project Site. The SWPPP would also list the applicable BMPs recommended in the SQIP and *Stormwater Quality Design Manual for the Sacramento Region* that would be implemented to mitigate construction-related impacts (i.e., sandbags, gravel traps, vegetation). Furthermore, the Project Applicant would adhere to the applicable requirements related to new development as outlined in Chapter 15.88 (Grading, Erosion, and Sediment Control) of the City's Municipal Code.

The Project would not have the potential to result in substantial impacts to groundwater supplies or recharge during construction, as groundwater is not anticipated to be encountered until reaching a minimum of 10 feet bgs. However, in the event that groundwater is encountered, and dewatering be required, the Project would be required to comply with the NPDES Dewatering Permit regulations (R4-2013-0095), which regulates the discharge of dewatering wastes from construction and other similar types of discharges that pose an insignificant threat to water quality.

Operational Activities

Although the Project Site is partially developed with two buildings and a surface parking lot, both buildings are currently vacant and is not utilized. Therefore, Project operations would be greater than pre-development conditions. Under the Project, new underground storm drain utility lines on-site to catch stormwater runoff. Runoff on-site would be drained into a new storm drain detention system that would filter out sediment and erosion, and the remaining stormwater would be drained to the City's existing underground stormwater drainage infrastructure off-site. The Project would also install new stormwater drainage lines along the southern and western perimeter of the Project Site that would drain runoff to the City's existing storm drainage mains on Marysville Boulevard and Ermina Drive. Runoff from the Project Site would then be conveyed through existing infrastructure to the City's Drainage Basin 158. On-site storm drain inlets would be installed along the western perimeter of the Project Site.

The proposed on-and off-site stormwater infrastructure for the Project would meet the design requirements outlined in the City of Sacramento Department of Utilities' *Onsite Design Manual For Onsite Drainage, Sewer, Water, Stormwater Quality and Erosion and Sediment Control*. Furthermore, as a standard Condition of Approval (COA) for development projects in the City, the Project Applicant would prepare and submit project-specific drainage studies to the City's Department of Utilities for review and approval. These studies must show that the Project would incorporate adequate water quality control facilities and certified full capture trash control devices. In doing so, the Project would demonstrate compliance with Section 13.08.140 (Private sewer or storm drain lines) and Section 13.08.145 (Mitigation of drainage impacts; design and procedures manual for water, sanitary sewer, storm drainage, and water quality facilities) of the City's Municipal Code. Additionally, to address the environmental effects of the Project related to groundwater recharge, and the SWPPP, the Project would implement BMPs (i.e., drought-resistant landscaping) to reduce the amount of erosion and siltation on-and-off-site.

The Project would not include any land uses or facilities that would require groundwater extraction or have the capacity to substantially decrease groundwater supplies or recharge. The Project would include the development of a mixed-used building that would include residential and commercial uses. Furthermore, the Project would adhere to the regulations and requirements outlined in the 2014 Groundwater Management Plan and with the 2015 Sustainable Groundwater Management Act (SGMA), which would further reduce environmental effects of the proposed project related to groundwater recharge. The Project Site is located approximately 85 miles from the Pacific Ocean and is not located within a tsunami hazard

area.[34] Additionally, according to the California Department of Water Resources, the Project Site is not located within a designated dam inundation area.[35]

In conclusion, although Project implementation would increase impervious surfaces onsite, the Project Applicant would install a new storm drainage system on-site and off-site to minimize the amount of erosion, siltation, and runoff from the Project Site to maintain compliance with the City's and state's water quality standards. Implementation of this storm drainage system, as well as adherence to all state, regional, and local regulatory requirements, would ensure that the Project would not degrade water quality and violate the SWRCB's water quality objectives. No additional significant environmental effects would occur.

B) No additional significant environmental effect.

As discussed above, the Project Site is located within Zone X. Therefore, the Project would not place housing or structures within a 100-year flood hazard area, and no additional significant environmental effects would occur.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Hydrology and Water Quality.

---

34 California Department of Conservation, "Los Angeles County Tsunami Hazard Areas." Available online at: https://www.conservation.ca.gov/cgs/tsunami/maps/los-angeles, accessed May 31, 2022.

35 California Department of Water Resources, "California Dam Breach Inundation Maps." Available online at: https://fmds.water.ca.gov/maps/damim/, accessed May 31, 2022.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
9. NOISE			
Would the project:			
A) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases?	☐	☐	☒
B) Result in residential interior noise levels of 45 dBA L_{dn} or greater caused by noise level increases due to the project?	☐	☐	☒
C) Result in construction noise levels that exceed the standards in the City of Sacramento general plan or Noise Ordinance?	☐	☐	☒
D) Permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction?	☐	☐	☒
E) Permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations?	☐	☐	☒
F) Permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic?	☐	☐	☒

The following discussion is based on the information contained in the Project's Noise & Vibration Technical Report, which is included as **Appendix C**, **Noise Report**, to this Initial Study.

Standards of Significance

For purposes of this Initial Study, impacts due to noise may be considered significant if construction and/or implementation of the Proposed Project would result in the following impacts that remain significant after implementation of general plan policies:

- result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for various land uses due to the project's noise level increases;

- result in residential interior noise levels of 45 dBA Ldn or greater caused by noise level increases due to the project;
- result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- permit existing and/or planned residential and commercial areas to be exposed to vibration-peak-particle velocities greater than 0.5 inches per second due to project construction;
- permit adjacent residential and commercial areas to be exposed to vibration peak particle velocities greater than 0.5 inches per second due to highway traffic and rail operations; or
- permit historic buildings and archaeological sites to be exposed to vibration-peak-particle velocities greater than 0.2 inches per second due to project construction and highway traffic.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential for development under the 2035 General Plan to increase noise levels in the community. New noise sources include vehicular traffic, aircraft, railways, light rail and stationary sources. The general plan policies establish exterior (Policy EC 3.1.1) and interior (Policy EC 3.1.3) noise standards. A variety of policies provide standards for the types of development envisioned in the general plan. See Policy EC 3.1.8, which requires new mixed-use, commercial and industrial development to mitigate the effects of noise from operations on adjoining sensitive land use, and Policy 3.1.9, which calls for the City to limit hours of operations for parks and active recreation areas to minimize disturbance to nearby residences. Notwithstanding application of the general plan policies, noise impacts for exterior noise levels (Impact 4.8-1) and interior noise levels (Impact 4.8-2), and vibration impacts (Impact 4.8-4) were found to be significant and unavoidable.

Answers to Checklist Questions

A) No additional significant environmental effect.

While construction activity would increase noise levels in the vicinity of the Project Site, the Project would be consistent with Section 8.68.080 of the City's Municipal Code which regulates permitted hours of construction. In addition, the Project's construction activities would not exceed the FTA's general construction noise criteria of 90 dBA Leq (1-hour) at any sensitive receptors. Noise generated from the operation of the Project would be attributed to the vehicle trips generated from the Project; the traffic generated from the project would not result in a doubling of traffic on the roads, plus the Project is consistent with the surrounding land uses, which generate mobile noise sources typical of a residential

neighborhood. Neither construction nor operation of the Project would result in an exceedance of the normally acceptable category for various land uses.

B) No additional significant environmental effect.

The Project would not result in an exceedance of the interior noise levels of 45 dBA Ldn or greater. Construction of the Project would be temporary and localized with no single piece of equipment exceeding more than 77.8 dBA at the closest sensitive receptor (residences located 35 feet to the west and to the north). The Project's compliance with Municipal Code Section 8.68.080 (which exempts construction from adherence to noise thresholds so long as the project construction takes place between the hours of 7:00 a.m. through 6:00 p.m. on Monday through Saturday and 9:00 a.m. and 6:00 p.m. on Sunday **and** that the operation of an internal combustion engines is equipped with suitable exhaust and intake silencers) Would ensure the Project would not have potential to exceed the established noise standards. Project operations would be consistent with the surrounding land uses and would not result in a significant increase in noise levels beyond existing conditions. The Project would not result in residential interior levels of 45 dBA Ldn or greater.

C) No additional significant environmental effect.

Policy EC 3.1.10 from the General Plan states that the City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible. The Municipal Code under Section 8.68.080 goes on to state that noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday are exempt from noise regulations; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. While construction activity would increase noise levels in the vicinity of the Project Site, the Project's construction activities would adhere to City's permissible hours of construction, and the Project would also not exceed the FTA's general construction noise criteria of 90 dBA Leq (1-hour) at any sensitive receptors. The Project would implement best management practices to reduce noise from construction equipment such as equipping all equipment with properly operating and maintained mufflers and other State-required noise attenuation devices. Construction of the Project would not exceed the standards in the City of Sacramento general plan or noise ordinance.

D) No additional significant environmental effect.

The Project is projected to create a vibration peak particle velocity of no more than 0.054 inches per second during construction, which is well below the 0.5 inches per second threshold.

E) No additional significant environmental effect.

Operations of the Project would not have the potential to generate a vibration peak particle velocity greater than 0.5 inches since the Project is an infill mixed-use residential development that does not include the operations of on-site sources capable of generating substantive groundborne vibration.

F) No additional significant environmental effect.

There are no historic or archaeological sites within or near the Project Site. Despite this, even if there were historic or archaeological sites within or near the Project Site, construction of the Project would produce a peak particle velocity of no more than 0.054 inches per second, which is well below the 0.2 inches per second threshold.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Noise.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
10. PUBLIC SERVICES			
A) Would the project result in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan?	☐	☐	☒

Environmental Setting

Fire Protection

The Sacramento Fire Department (SFD) provides fire protection services and emergency medical services to the Project Site. First-response service is provided by Station 17, located at 1311 Bell Avenue approximately 1.4 miles northwest of the Project Site; and Station 18, located at 746 North Market Street approximately 2.8 miles west of the site.

Police Protection

Police protection and law enforcement services for the Project Site are provided by the Sacramento Police Department (SPD). The closest police facility to the Project Site is the William J. Kennedy Police Facility, located approximately 0.40 miles northwest of the Project Site at 3550 Marysville Boulevard.

School Facilities

The Project Site is located within the Twin Rivers School District (TRSD). The TRSD serves over 26,000 Pre-Kindergarten to Adult students with over 30 schools and academic programs.[36] The closest school within the district to the Project Site is Hagginwood Elementary School, located approximately 0.18 miles southeast of the Project Site at 1418 Palo Verde Avenue.

Parks

The City of Sacramento Parks and Recreation Department maintains all parks and recreational facilities within the City of Sacramento. The Parks Department classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and 3) regional parks. Neighborhood parks are typically less

36 Twin Rivers Unified School District, "Home Page." Available online at: https://www.twinriversusd.org/, accessed June 1, 2023.

than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Community Parks are generally 10 to 60 acres and serve an area of approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and are developed with a wide range of improvements not usually found in local neighborhood and community parks. As noted in the City's 2035 General Plan Background Report, the City currently contains 222 developed and undeveloped park sites, 88 miles of road bikeways and trails, 21 lakes/ponds or beaches, 27 aquatic facilities, and extensive recreation facilities in the City parks. The 222 parks comprise 3,178 acres. Of these, 1,573 acres are neighborhood and community parks, and the remaining are City and non-city regional parks. The City currently provides approximately 3.4 acres of neighborhood and community park per 1,000 persons citywide.

Library Facilities

The Sacramento Public Library (SPL) provides library services to the Project Site. The SPL is a Countywide public library system with 30 participating libraries in Sacramento County. The closest participating SPL is the Del Paso Heights Library, located approximately 0.94 miles northwest of the Project Site at 920 Grand Avenue.

Standards of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, school facilities, or other governmental services beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of the 2035 General Plan on various public services. These include police, fire protection, schools, libraries and emergency services (Chapter 4.10).

The General Plan provides that adequate staffing levels for police and fire are important for the long-term health, safety and well-being of the community (Goal PHS 1.1, PHS 2.1). The Master EIR concluded that effects of development that could occur under the General Plan would be less than significant.

The General Plan includes policies that call for the City to consider impacts of new development on schools (see Policy ERC 1.1.2 setting forth locational criteria, and Policy ERC 1.1.4 that encourages joint-use development of facilities) and reduce impacts on schools to a less-than-significant level (see Impacts 4.10-3, 4). Impacts on library facilities were considered less than significant (Impact 4.10-5).

Answers to Checklist Questions

A) No additional significant environmental effect.

The Project would introduce up to 108 residential units to a currently vacant site. As discussed in **Section 3,** the Project would result in an increase in employees within the City. However, this increase would be nominal. Due to the limited increase in population and the nature of the proposed development, a substantial increase in the need for public facilities and services compared to the existing conditions is not anticipated.

The Project would include the installation of new fire hydrants along the western perimeter of the Project Site. The Project would meet the fire safety requirements (i.e., sprinkler systems, fire extinguisher system) that are outlined in the 2022 California Fire Code (CFC). The Project would also adhere to Section 15.36.050, which requires the Project Applicant to provide the Project construction plans to the City's fire code official upon inspection. Thus, the Project would not substantially increase the need for police or fire services beyond what has been previously anticipated in the 2035 General Plan, and impacts would not result in additional significant environmental effects.

The Project includes the development of 108 residential units, which could generate additional students within the Project Area. Additionally, the Project would develop approximately 6,155 square feet of commercial retail, which could indirectly generate additional students. Based on the TRSD's student generation rates for housing units and commercial development, the Project would generate a nominal increase in students and would not result in the need for new or physically altered schools.[37,38,39] Additionally, the Project would be subject to TRSD developer fees pursuant to Senate Bill 50 and Municipal Code Title 9 Division 1 Article 6, Interim School Facilities Fees. According to Government Code Section 65996, payment of statutory fees under Senate Bill 50 is considered to be full mitigation for new development projects. Thus, payment of developer impact fees would ensure Project impacts to TRSD services are proportionally offset and reduced and impacts would not result in additional significant environmental effects.

---

37 Twin Rivers School District, *School Facility Fee Justification Report For Residential, Commercial, and Industrial Development Projects*. Available online: https://www.twinriversusd.org/documents/Operations/General%20Services/Developer%20Fee/Twin_Rivers_-_Level_I_2016_FINAL_2016-03-30.pdf, accessed June 1, 2023.

38 All commercial development under the Project is assumed to fall under the "Community Shopping Centers" category of the School Facility Fee Justification Report For Residential, Commercial, and Industrial Development Projects.

39 The proposed housing units would generate up to 52 new students, and the proposed commercial development would generate an additional 4 students.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Public Services.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
11. RECREATION			
Would the project:			
A) Cause or accelerate substantial physical deterioration of existing area parks or recreational facilities?	☐	☐	☒
B) Create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan?	☐	☐	☒

Environmental Setting

The City of Sacramento Parks and Recreation Department maintains all parks and recreational facilities within the City of Sacramento. The Parks Department classifies parks according to three distinct types: 1) neighborhood parks; 2) community parks; and 3) regional parks. Neighborhood parks are typically less than ten acres in size and are intended to be used primarily by residents within a half-mile radius. Community Parks are generally 10 to 60 acres and serve an area of approximately two to three miles, encompassing several neighborhoods and meeting the requirements of a large portion of the City. Regional parks are larger in size and are developed with a wide range of improvements not usually found in local neighborhood and community parks. As noted in the City's 2035 General Plan Background Report, the City currently contains 222 developed and undeveloped park sites, 88 miles of road bikeways and trails, 21 lakes/ponds or beaches, 27 aquatic facilities, and extensive recreation facilities in the City parks. The 222 parks comprise 3,178 acres. Of these, 1,573 acres are neighborhood and community parks, and the remaining are City and non-city regional parks. The City currently provides approximately 3.4 acres of neighborhood and community park per 1,000 persons citywide. The closest public recreational facility to the Project Site is the Joe Mims Junior Hagginwood Community Center, located approximately 0.08 miles north of the Project Site at 3271 Marysville Boulevard.

Residential and non-residential projects that are built in the City of Sacramento are required to pay a park development impact fee per Chapter 18.56 of the Sacramento City Code. The fees collected pursuant to Chapter 18.56 are primarily used to finance the construction of neighborhood and community park facilities.

Standards of Significance

For purposes of this Initial Study, impacts to recreational resources are considered significant if the proposed project would do either of the following:

- cause or accelerate substantial physical deterioration of existing area parks or recreational facilities; or
- create a need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Chapter 4.9 of the Master EIR considered the effects of the 2035 General Plan on the City's existing parkland, urban forest, recreational facilities and recreational services. The 2035 General Plan identified a goal of providing an integrated park and recreation system in the City (Goal ERC 2.1). Impacts were considered less than significant after application of the applicable policies. (Impacts 4.9-1 and 4.9-2)

Answers to Checklist Questions

A & B) No additional significant environmental effect.

See **Response 10 A)**. The proposed project would not cause or accelerate substantial physical deterioration of existing area parks or recreational facilities or directly generate a substantial population increase within the City. According to the 2035 General Plan Master EIR, implementation of the policies and goals within the General Plan would reduce impacts to parks and recreational facilities to a less-than-significant level. Because the proposed project is consistent with the 2035 General Plan, the increased population associated with the proposed project and increase in demand for recreational facilities was anticipated and analyzed within the 2035 General Plan Master EIR. The proposed development would also include a bike room, bike racks, and a gym to promote recreational activities for residents. Implementation of these amenities would further reduce the need for construction or expansion of recreational facilities beyond what was anticipated in the 2035 General Plan. As such, the Project would not result in an additional significant environmental effect beyond what was previously evaluated in the Master EIR and on the City's existing recreational facilities.

Mitigation Measures

None required.

Findings

The Project would have no additional project-specific environmental effects relating to Recreation.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
12. TRANSPORTATION AND CIRCULATION			
Would the project:			
A) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities?	☐	☒	☐
B) Would the project conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b)?	☐	☐	☒
C) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒
D) Result in inadequate emergency access?	☐	☒	☐

Environmental Setting

The Project Site is located in the North Sacramento Community Plan Area and is bound by Arcade Boulevard to the south, Marysville Boulevard to the east, and Ermina Drive to the west and north. The Project proposes an infill mixed-use development with 111 parking spaces.

Existing Roadways

Ermina Drive is a two-lane roadway with one lane travelling in each direction. The roadway travels in an east-west direction from Arcade Boulevard and then travels in a north-south direction to connect to Marysville Boulevard. Ermina Drive is not identified as a classified roadway in the 2035 General Plan or the North Sacramento Community Plan.

Marysville Boulevard is a four-lane roadway with two lanes of travel in each direction. The roadway travels in a north-south direction beginning at the intersection of Doolittle Street, directly south of Interstate 880 (I-880). The roadway joins Del Paso Boulevard and becomes part of Del Paso Boulevard. The posted speed limit of the segment adjacent to the Project Site is 35 miles per hour (mph), however, the speed limit of Marysville Boulevard is reduced to 25 mph within school zones. Marysville Boulevard is classified in the 2035 General Plan as an Arterial Roadway.

Arcade Boulevard is a four-lane roadway with two lanes travelling in each direction. The roadway travels in an east-west direction. The posted speed limit for Arcade Boulevard is 35 mph. The roadway is classified by the 2035 General Plan as a Major Collector Roadway.

Pedestrian And Bicycle Facilities

Existing on-site pedestrian facilities include the existing sidewalk located east of the Project Site. According to Chapter 3, Mobility, of the 2035 General Plan, Marysville Boulevard is classified by the City as a Class I Bike Path. According to the 2035 General Plan, Class I Bikeways are off-street bikeways. As defined in the *City of Sacramento Bicycle Master Plan*, off-street bikeways are paved bike paths (also known as Class I bikeways) for the use of bicycle riders and pedestrians while prohibiting motorized vehicles. However, there are currently no paved bike lanes located along Marysville Boulevard.

Transit Facilities

The Project Site is served by the Sacramento Regional Transit which provides transit service to the Project via bus route 86 with two bus stops located by the intersection of Marysville Boulevard and Arcade Boulevard. The Project Site is located approximately 64 and 272 feet west of both bus stops, respectively. Additionally, the Project Site is located approximately 0.49-miles northwest of the Marconi/Arcade Transit Station, which serves as a station for the Sacramento Regional Transit Blue Line light-rail transit.

Standards of Significance

Vehicle Miles Traveled (VMT)

The City of Sacramento uses several "screening thresholds" to determine whether a project may be presumed to have a less-than-significant VMT impact without conducting a detailed projected generated VMT analysis. For residential projects, the screening criteria includes:

- **Small Projects** – Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact.

- **Map-Based Screening** – Maps created with VMT data can illustrate areas that are currently below threshold VMT. Output from the SACOG regional travel demand model may be generalized to simplify project VMT estimates as well as producing screening maps. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.

- **Near Transit Stations** – presumption that certain projects proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. Additionally, the project would need to have a floor area ratio (FAR) of at least 0.75, without excessive parking, is consistent with the adopted regional SCS, and does not result in a reduction of citywide affordable housing.

- **Affordable Residential Development** – adding affordable housing to infill locations generally.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

Transportation and circulation were discussed in the Master EIR in Chapter 4.12. Various modes of travel were included in the analysis, including vehicular, transit, bicycle, pedestrian, and aviation. Goals and policies established in the 2035 General Plan provide substantial guidance regarding mobility and transportation. Specifically, Mobility Goal 1.1, calls for a transportation system that is effectively planned, managed, operated and maintained, Policy M 1.2.1, promotes multimodal choices, Policy M 1.5.6, supports state highway expansion and management consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG MTP/SCS), and Policy LU 4.2.1, supports development that encourages walking and biking.

While the General Plan includes numerous policies that direct the development of the City's transportation system, the Master EIR concluded that individual development projects under the General Plan would result in significant and unavoidable effects. See Impacts 4.12-3 (roadway segments in adjacent communities, and Impact 4.12-4 (freeway segments).

It should be noted that the 2035 General Plan Master EIR was certified on March 3, 2009, and therefore analyzed potential impacts to the City's transportation system by using level of service (LOS). As of July 1, 2020, provisions of Senate Bill (SB) 743 were put into effect Statewide. SB 743 provided updates to Section 15064.3, subdivision (b)(1) of the *CEQA Guidelines* in November 2017 amending the Appendix G checklist question for transportation impacts to replace references to vehicle delay and level of service (LOS) with vehicle miles traveled (VMT).

Answers to Checklist Questions

A) Effect can be mitigated to less than significant.

The Project is located adjacent to Marysville Boulevard which is currently served by a public bus route (Foothill Transit Line 187) and is within walking distance of the existing bus stops located along Marysville

Boulevard and Arcade Boulevard. Construction activities associated with the Project would not affect access or safety at the existing bus stops, nor would it hinder public transit service along Marysville Boulevard. In addition, construction and operation of the Project would not result in impacts to the existing Marconi/Arcade Transit or the Blue Line light-rail transit, due to the distance between the Project site and the transit stations.

The Project would construct two new driveways along Ermina Drive and Arcade Boulevard. Construction activities associated with the Project would result in temporary closure of the existing sidewalk on Arcade Boulevard and temporary partial-lane closures of both roadways would occur, resulting in potentially significant impacts to the pedestrian and vehicular circulation. Accordingly, the Project would conflict with City policies pertaining to traffic circulation and access to pedestrian facilities. Implementation of **Mitigation TRA-1** would require the Project Applicant to prepare and submit a construction Traffic Management Plan (TMP) that would detail methods to maintain circulation and access within the Project Area during construction. As such, impacts would be reduced to less than significant.

B) No additional significant environmental effect.

The Project was evaluated against the following screening criteria to determine if it could be presumed to have a less than significant VMT impact:

Near Transit Stations: As stated above, projects that are located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor, have a FAR of 0.75 or more, does not have excessive parking, is consistent with the adopted regional SCS, and does not result in a reduction of citywide affordable housing will have a less-than-significant impact on VMT.

The Project Site is located approximately 0.49 miles northwest of the Sacramento Regional Transit Blue Line. The Project would construct a 125,051 square foot mixed-use building within a 1.5-acre lot and would therefore have a FAR of 1.91. The Project would be consistent with its land use designation as Suburban Corridor in the 2035 General Plan. Thus, the proposed development has been accounted for in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) forecasting for land uses. Lastly, because the existing structures on-site consist of two vacant buildings, the Project would not reduce citywide affordable housing. Therefore, the Project would result in less than significant impacts to VMT, and no additional significant environmental effects would occur.

C) No additional significant environmental effect.

Primary vehicular access to the Project Site would be comprised of two new driveways along Ermina Drive and Arcade Boulevard. Internal site circulation would be accommodated by a generally circular roadway that covers the entirety of the site.

The Project would include modifications to Ermina Drive, including separated sidewalks with landscape, gutter and curb improvements, and the inclusion of a loading zone. In addition, the Project would include the construction of a solid median along Arcade Boulevard to prohibit left turns in and out of the Project driveway. and The roadway improvements are consistent with City Codes and the Traffic Study (please see **Appendix D, Transportation Study**) prepared by the Department of Public Works, and therefore, would not affect the existing transportation system or circulation in a way that would result in new roadway hazards. In addition, given that the Project is consistent with the General Plan land use designation for the site, incompatible uses, such as farm equipment, are not anticipated to operate on-site.

Overall, implementation of the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), and a less than significant impact would occur.

D) Effect can be mitigated to less than significant.

As discussed in **Section 10. Public Services**, Project operations would not interfere with the daily services of the SFD and SPD. The Project would incorporate all design and safety standards outlined in the 2022 CFC, such as installing fire hydrants and implementing fire safety standards. Further, the Project would introduce new access points for emergency vehicle services by constructing two new driveways along Ermina Drive and Arcade Boulevard. Should temporary partial lane closures be required during the construction phase for either driveway construction, the Project Applicant shall adhere to **Mitigation Measure TRA-1** and implement a TMP to maintain emergency access during the construction process and minimize congestion. As such, effects can be mitigated to less than significant.

Mitigation Measures

TRA-1 Prior to final plan approval, the Project Applicant shall prepare a transportation management plan (TMP) for review and approval of City's Department of Public Works. The TMP shall specify that one direction of travel along adjacent sidewalks and in each direction on adjacent roadways must always be maintained during construction activities. In the event that sidewalk or full lane closures are required, and one direction cannot be maintained, the TMP shall identify planned detours. The TMP shall include measures such

as construction signage, limitations on timing for lane closures to avoid peak hours, and construction flag person(s) to direct traffic during heavy equipment use. Measures such as construction signage and temporary barriers shall be provided for pedestrian travel. Further, the TMP shall require that at least one access point for emergency vehicles be maintained throughout the duration of Project construction.

Findings

All additional significant environmental effects of the Project relating to Transportation and Circulation can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
13. TRIBAL CULTURAL RESOURCES			
Would the project:			
A) Cause a substantial adverse change in the significance of a tribal cultural resource, as defined in Public Resources Code 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			
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐

Environmental Setting

Please reference the Cultural Resources Chapter for the Ethnohistory of the historic indigenous groups that occupied the region. This section focuses on the contemporary tribal communities and tribal cultural resources as they pertain to AB52.

This section analyzes and evaluates the potential impacts of the project on Tribal cultural resources, both identified and undiscovered. Tribal cultural resources, as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code (PRC) Section 21074, are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a Tribe. A Tribal cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

The unanticipated find of Native American human remains would also be considered a Tribal cultural resource and are therefore analyzed in this section.

The proposed project area is situated within the lands traditionally occupied by the Valley Nisenan, or Southern Maidu. Many descendants of Valley Nisenan throughout the larger Sacramento region belong to the United Auburn Indian Community, Shingle Springs, Ione Band, Colfax-Todds Valley, and Wilton Rancheria Tribes. The Tribes actively participate in the identification, evaluation, preservation, and restoration of Tribal Cultural Resources.

Data Sources/Methodology

Under PRC section 21080.3.1 and 21082.3, the City must consult with tribes traditionally and culturally affiliated with the project area that have requested formal notification and responded with a request for consultation. The parties must consult in good faith. Consultation is deemed concluded when the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource when one is present or when a party concludes that mutual agreement cannot be reached. Mitigation measures agreed on during the consultation process must be recommended for inclusion in the environmental document.

Native American Consultation

On February 1, 2023, the City of Sacramento sent AB52 Consultation notification letters that the project was being addressed under CEQA, as required by PRC 21080.3.1, to the Native American tribes that had previously requested such notifications. Notifications were sent to United Auburn Indian Community (UAIC), Wilton Rancheria, Shingle Springs Band of Miwok Indians, and Buena Vista Rancheria. UAIC responded on February 9, 2023, and declined to consult on the project. Wilton Rancheria, Shingle Springs Band of Miwok Indians, and Buena Vista Rancheria did not respond within 30 days of receipt of the AB52 notification.

In response to the City's notification of the project to the United Auburn Indian Community of the Auburn Rancheria (UAIC), UAIC conducted a records search for the identification of Tribal Cultural Resources for this project which included a review of pertinent literature and historic maps, and a records search using UAIC's Tribal Historic Information System (THRIS). UAIC's THRIS database is composed of UAIC's areas of oral history, ethnographic history, and places of cultural and religious significance, including UAIC Sacred Lands that are submitted to the Native American Heritage Commission (NAHC). The THRIS resources shown in this region also include previously recorded indigenous resources identified through the California Historic Resources Information System Center (CHRIS) as well as historic resources and survey data.

Regulatory Setting

Federal

There are no Federal plans, policies, or regulations related to Tribal Cultural Resources that are directly applicable to the proposed project, however Section 106 of the National Historic Preservation Act does require consultation with Native Americans to identify and consider certain types of cultural resources. Cultural resources of Native American origin identified as a result of the identification efforts conducted under Section 106 may also qualify as tribal cultural resources under CEQA.

State

California Environmental Quality Act — Statute and Guidelines. CEQA requires that public agencies that finance or approve public or private projects must assess the effects of the project on tribal cultural resources. Tribal cultural resources are defined in Public Resources Code (PRC) 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 that is (1) listed or determined eligible for listing on the California Register of Historical Resources (CRHR) or a local register, or (2) that are 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

California Public Resources Code Section 5024. PRC Section 5024.1 establishes the CRHR, which is the authoritative guide for identifying the State's historical resources to indicate what properties are to be protected, if feasible, from substantial adverse change. For a resource to be eligible for the CRHR, it must be more than 50 years old, retain its historic integrity, and satisfy one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- 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.

Has yielded, or may be likely to yield, information important in prehistory or history.

Standards of Significance

For the purposes of this Initial Study, a tribal cultural resource is considered to be a significant resource if the resource is: 1) listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources; or 2) the resource has been 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. For purposes of this Initial Study, impacts on tribal cultural resources may be considered significant if construction and/or implementation of the proposed project would result in the following:

- cause a substantial change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the potential effects of development under the 2035 General Plan on prehistoric and historic resources (see Master EIR Chapter 4.4; Appendix B, Cultural Resources; and Appendix C, Background Report), but did not specifically address tribal cultural resources because that resource type had not yet been defined in CEQA at the time the Master EIR was adopted. The Master EIR identified significant and unavoidable effects on historic resources and archaeological resources, some of which could be tribal cultural resources as defined Public Resources Code 21074. Ground-disturbing activities resulting from implementation of development under the 2035 General Plan could affect the integrity of an archaeological site (which may be a tribal cultural resource), thereby causing a substantial change in the significance of the resource. General plan policies identified as reducing such effects on cultural resources that may also be tribal cultural resources include identification of resources on project sites (Policy HCR 2.1.1); implementation of applicable laws and regulations (Policy HCR 2.1.2); consultation with appropriate organizations and individuals including the Native American Heritage Commission and implementation of their consultation guidelines (Policy HCR 2.1.3); enforcement programs to promote the maintenance, rehabilitation, preservation, and interpretation of the City's historic resources (Policy HCR 2.1.4); listing of qualified historic resources under appropriate national, State, and local registers (Policy HCR 2.1.5); consideration of historic and cultural resources in planning studies (Policy HCR 2.1.6); enforcement of compliance with local, State, and federal historic and cultural preservation requirements (Policy HCR 2.1.8); and early consultation with owners and land developers to minimize effects (Policy HCR 2.1.10).

Of particular relevance to this project are policies that ensure compliance with protocol that protect or mitigate impacts to archaeological resources (Policy HCR 2.1.16) and that encourage preservation and minimization of impacts on cultural resources (Policy HCR 2.1.17).

Answers to Checklist Questions

A) Effect can be mitigated to less than significant.

Tribal cultural resources include: 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing in the California Register of Historical Resources (California Register), or local register of historical resources, as defined in PRC Section 5020.1(k); or, 2) a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c). For a cultural landscape to be considered a tribal cultural resource, it must be geographically defined in terms of the size and scope of the landscape (PRC Section 21074[b]). A historical resource, as defined in PRC Section 21084.1, unique archaeological resource, as defined in PRC Section 21083.2(g), or non-unique archaeological resource, as defined in PRC Section 21083.2(h), may also be a tribal cultural resource.

As discussed in **Appendix B, Cultural Resources Evaluation**, the NCCIC determined that the Project Site has low potential for locating indigenous-period/ethnographic-period cultural resources.

A sacred land files search conducted by the Native American Heritage Commission (NAHC) determined that the Project Site is positive for Native American resources. Accordingly, as required under the provisions of PRC Section 21080.3, the City would be required to notify and consult with the potentially impacted Native Americans tribes of the Project. Given that the Project Site has been previously disturbed, there may be potential impacts, but they can be mitigated to less than significant levels.

Mitigation Measures

TCR-1a: In the Event that Tribal Cultural Resources Are Discovered During Construction, Implement Avoidance and Minimization Measures to Avoid Significant Impacts and Procedures to Evaluate Resources.

If tribal cultural resources (such as structural features, unusual amounts of bone or shell, artifacts, or human remains) are encountered at the project site during construction, work shall be suspended within 100 feet of the find (based on the apparent distribution of cultural materials), and the construction contractor shall immediately notify the project's

City representative. Avoidance and preservation in place are the preferred manner of mitigating impacts to tribal cultural resources. This will be accomplished, if feasible, by several alternative means, including:

- Planning construction to avoid tribal cultural resources, archaeological sites and/or other cultural resources; incorporating cultural resources within parks, green-space or other open space; covering archaeological resources; deeding a cultural resource to a permanent conservation easement; or other preservation and protection methods agreeable to consulting parties and regulatory authorities with jurisdiction over the activity.

- Recommendations for avoidance of tribal cultural resources will be reviewed by the City representative, interested culturally affiliated Native American tribes and other appropriate agencies, in light of factors such as costs, logistics, feasibility, design, technology and social, cultural and environmental considerations, and the extent to which avoidance is consistent with project objectives. Avoidance and design alternatives may include realignment within the project site to avoid tribal cultural resources, modification of the design to eliminate or reduce impacts tribal cultural resources, or modification or realignment to avoid highly significant features within a tribal cultural resource.

- Native American representatives from interested culturally affiliated Native American tribes will be notified to review and comment on these analyses and shall have the opportunity to meet with the City representative and its representatives who have technical expertise to identify and recommend feasible avoidance and design alternatives, so that appropriate and feasible avoidance and design alternatives can be identified.

- If the discovered tribal cultural resource can be avoided, the construction contractor(s), will install protective fencing outside the site boundary, including a 100-foot buffer area, before construction restarts. The boundary of a tribal cultural resource will be determined in consultation with interested culturally affiliated Native American tribes and tribes will be notified to monitor the installation of fencing. Use of temporary and permanent forms of protective fencing will be determined in consultation with Native American representatives from interested culturally affiliated Native American tribes.

- The construction contractor(s) will maintain the protective fencing throughout construction to avoid the site during all remaining phases of construction. The area will be demarcated as an "Environmentally Sensitive Area".

If a tribal cultural resource cannot be avoided, the following performance standard shall be met prior to continuance of construction and associated activities that may result in damage to or destruction of tribal cultural resources:

- Each resource will be evaluated for California Register of Historical Resources-(CRHR) eligibility through application of established eligibility criteria (California Code of Regulations 15064.636), in consultation with consulting Native American Tribes, as applicable.

If a tribal cultural resource is determined to be eligible for listing in the CRHR, the City will avoid damaging effects to the resource in accordance with California PRC Section 21084.3, if feasible. The City shall coordinate the investigation of the find with a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology) approved by the City and with interested culturally affiliated Native American tribes that respond to the City's notification. As part of the site investigation and resource assessment, the City and the archaeologist shall consult with interested culturally affiliated Native American tribes to assess the significance of the find, make recommendations for further evaluation and treatment as necessary and provide proper management recommendations should potential impacts to the resources be determined by the City to be significant. A written report detailing the site assessment, coordination activities, and management recommendations shall be provided to the City representative by the qualified archaeologist. These recommendations will be documented in the project record. For any recommendations made by interested culturally affiliated Native American tribes that are not implemented, a justification for why the recommendation was not followed will be provided in the project record.

Native American representatives from interested culturally affiliated Native American Tribes and the City representative will also consult to develop measures for long-term management of any discovered tribal cultural resources. Consultation will be limited to actions consistent with the jurisdiction of the City and considering ownership of the subject property. To the extent that the City has jurisdiction, routine operation and maintenance within tribal cultural resources retaining tribal cultural integrity shall be consistent with the avoidance and minimization standards identified in this mitigation measure.

If the City determines that the project may cause a significant impact to a tribal cultural resource, and measures are not otherwise identified in the consultation process, the following are examples of mitigation capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to the resource. These measures may be considered to avoid or minimize significant adverse impacts and constitute the standard by which an impact conclusion of less-than significant may be reached:

- Avoid and preserve resources in place, including, but not limited to, planning construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treat the resource with culturally appropriate dignity considering the Tribal cultural values and meaning of the resource, including, but not limited to, the following:
- Protect the cultural character and integrity of the resource.
- Protect the traditional use of the resource.
- Protect the confidentiality of the resource.
- Establish permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or using the resources or places.
- Protect the resource.

TCR-1b: Implement Procedures in the Event of the Inadvertent Discovery of Human Remains. If an inadvertent discovery of human remains is made at any time during project-related construction activities or project planning, the City the following performance standards shall be met prior to implementing or continuing actions such as construction, which may result in damage to or destruction of human remains. In accordance with the California Health and Safety Code (HSC), if human remains are encountered during ground-disturbing activities, the City shall immediately halt potentially damaging excavation in the area of the remains and notify the Sacramento County Coroner and a professional archaeologist to determine the nature of the remains. The Coroner is required to examine

all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (HSC Section 7050.5[b]).

If the human remains are of historic age and are determined to be not of Native American origin, the City will follow the provisions of the HSC Section 7000 (et seq.) regarding the disinterment and removal of non-Native American human remains.

If the Coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC Section 7050[c]). After the Coroner's findings have been made, the archaeologist and the NAHC-designated Most Likely Descendant (MLD), in consultation with the landowner, shall determine the ultimate treatment and disposition of the remains. The responsibilities of the City for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.9 et seq.

Findings

All additional significant environmental effects of the Project to Tribal Cultural Resources can be mitigated to a less-than-significant level.

Issues:	Effect will be studied in the EIR	Effect can be mitigated to less than significant	No additional significant environmental effect
14. UTILITIES AND SERVICE SYSTEMS			
Would the project:			
A) Result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments?	☐	☐	☒
B) Require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts?	☐	☐	☒

Environmental Setting

Water Supply

The City of Sacramento supplies water to the Project Site and the City. The City's water supply comes from the American and Sacramento Rivers and groundwater pumped from the North and South American Sub-basins.[40] Water from the American and Sacramento Rivers is diverted by two water treatment plants, the Sacramento River Water Treatment Plant, and the E.A. Fairbairn Water Treatment Plant. The proposed Project would be situated within the City of Sacramento Retail Water Service Area.[41] The Project Site currently has underground water mains that serviced the existing vacant buildings and connects to the City's four-inch water mains located along Marysville Boulevard and Arcade Boulevard.

According to the City's Urban Water Management Plan (UWMP), the City is projected to face an increase in water demand by the year 2045. However, the City is projected to provide an adequate supply to the City's future demands in normal year, single dry year, and multiple dry year scenarios. Specifically, by the year 2045, the City would have a surplus of 216,258 acre feet (af), of water available for supply in the normal year, single dry year, and multiple dry year scenarios, respectively.

---

40 City of Sacramento, *2020 Urban Water Management Plan: Draft Report*, May 2021. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Reports/R---038---City-of-Sacramento-Draft-2020-UWMP---05-18-21.pdf?la=en, accessed July 20, 2023.

41 City of Sacramento, *2020 Urban Water Management Plan: Draft Report*, May 2021. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Reports/R---038---City-of-Sacramento-Draft-2020-UWMP---05-18-21.pdf?la=en, accessed July 20, 2023.

Wastewater Treatment

The City's separate sewer system provides wastewater services to the Project Site and the North Sacramento Community Plan Area. Existing sewer mains are located on-site and are connected to sewer mains located off-site, along Arcade Boulevard. Wastewater from the Project Site would be separated into one of the City's 54 sewer basins, and then conveyed to the Sacramento Regional Wastewater Treatment Plant (SRWTP) via gravity flow or one of the 40 pumping stations located throughout the City.[42] For secondary treatment and disinfection of the flow, the City has entered into an agreement with the SRWTP to convey up to 60 million gallons per day (mgd). This treatment capacity is sufficient for the current dry weather flows of 18 mgd. The remaining capacity is reserved for stormwater. However, when the SRWTP has reached capacity, excess flows are directly discharged into the Sacramento River from Sump 2.

Stormwater

Stormwater drainage for the Project Site is currently collected by the City's storm drain systems located along the eastern perimeter along Marysville Boulevard, and subsequently pumped into nearby rivers, creeks, and drainages.

Solid Waste

The City of Sacramento collects all residential solid waste within the City limits. All residential solid waste collected in the north region is transported to the Sacramento County North Area Recovery Station (NARS), which has a maximum daily throughput of 2,400 tons of solid waste.[43,44] The refuse is then hauled to the Sacramento County Kiefer Landfill, which has a maximum daily throughput of 10,815 tons of solid waste per day and a remaining capacity of 112,900,000 tons of solid waste.[45]

---

42 City of Sacramento, *2035 General Plan Background Report*, March 2015. Available online at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-4---Utilities.pdf?la=en, accessed July 20, 2023.

43 City of Sacramento, *2035 General Plan Background Report*, March 2015. Available online at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-4---Utilities.pdf?la=en, accessed July 20, 2023.

44 CalRecycle, *SWIS Facility/Site Activity Details- North Area Transfer Station (34-AA-0002)*. Available online at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2071?siteID=2508, accessed July 20, 2023.

45 CalRecycle, *SWIS Facility/Site Activity Details- Sacramento County Landfill (Kiefer) (34-AA-0001)*. Available online at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2070?siteID=2507, accessed July 20, 2023.

Dry Utilities

Electrical services for the City are provided by the Sacramento Municipal Utility District (SMUD). Electrical utilities for the Project Site are currently provided by overhead electricity lines located along the southern and eastern perimeter of the Project Site.

Private companies that provide telecommunication services for the City include, but are not limited to Spectrum, AT&T, and Verizon. Similar to electrical utilities, telecommunication utilities to the Project Site are currently provided by overhead telecommunication lines located along the southern and eastern perimeter of the Project Site.

Standards of Significance

For the purposes of this Initial Study, an impact would be considered significant if the project resulted in the need for new or altered services related to fire protection, police protection, or school facilities beyond what was anticipated in the 2035 General Plan:

- result in the determination that adequate capacity is not available to serve the project's demand in addition to existing commitments or
- require or result in either the construction of new utilities or the expansion of existing utilities, the construction of which could cause significant environmental impacts.

Summary of Analysis under the 2035 General Plan Master EIR and Applicable General Plan Policies

The Master EIR evaluated the effects of development under the 2035 General Plan on water supply, sewer and storm drainage, solid waste, electricity, natural gas and telecommunications. See Chapter 4.11.

The Master EIR evaluated the impacts of increased demand for water that would occur with development under the 2035 General Plan. Policies in the general plan would reduce the impact generally to a less-than-significant level (see Impact 4.11-1) but the Master EIR concluded that the potential increase in demand for potable water in excess of the City's existing diversion and treatment capacity, and which could require construction of new water supply facilities, would result in a significant and unavoidable effect (Impact 4.11-2). The potential need for expansion of wastewater treatment facilities was identified as having a less-than-significant effect (Impact 4.11-4). Impacts on solid waste facilities were less than significant (Impact 4.11-5). Implementation of energy efficient standards as set forth in Titles 20 and 24 of the California Code of Regulations for residential and non-residential buildings, would reduce effects for energy to a less-than-significant level.

Answers to Checklist Questions

A and B) No additional significant environmental effect.

Water Supply and Infrastructure

The Project would utilize the existing underground water mains to provide potable water for the proposed mixed-use development and fire hydrants for fire suppression purposes. These water mains are currently connected to the City's existing water mains long Marysville Boulevard. As discussed in **Appendix A** to this Initial Study, the Project is anticipated to generate approximately 6,269,092 gallons per year, or 19.23 acre-feet per year (AFY). Thus, the Project would account for less than one percent of the City's projected water supply in a normal year, single dry year, and multiple dry year scenarios for the year 2045. Accordingly, the Project would be accounted for in the City's UWMP's current water supply and demand projections. The Project would be required to meet all applicable requirements for new water services and connections in Chapter 13.04 (Water System) of the Municipal, such as new private line installation requirements and all applicable service and connection fees. Furthermore, in the event that construction activities require additional potable water to be conveyed from the City's public mains, the Project Applicant would adhere to the development standards outlined in Section 13-2 of the City's Standard Specifications for Public Construction[46] and prepare a water supply plan for the City's Department of Utilities (DOU) prior to the initiation of such activities. This water supply plan would detail the anticipated quantity of water flow to be conveyed and the number, size, and material type of any pipes used. Nevertheless, the Project would not impact the City's adequate water supply and facilities and would have no additional project-specific environmental effects.

Wastewater

The Project would include the installation of new on-site sewers and connections to the City's existing sewer conveyance system off-site. The proposed sewer connections to the existing sewer main would comply with the size and design requirements outlined in the City's Standards and Specifications, and the Project would not require changes to the local wastewater conveyance system. As discussed, the Project would exceed the maximum density allowed under the Suburban Corridor Land Use designation and, therefore, would not be consistent with planned projections under the City's 2035 General Plan. However, this increase in density would represent a nominal percentage of the maximum daily capacity of the SRWTP. The Project Applicant would also be subject to new connection fees and developer impact fees

46 City of Sacramento. *Standard Specifications for Public Construction*, April 2020. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Specs-Drawings/Standard_Specifications.pdf?la=en. Accessed on October 10, 2023.

under the City's impact fee programs. Furthermore, the proposed connections to the City's existing sewer mains would be subject to review and approval by the City's Department of Utilities, per Section 13.08.370 (Approval of plans) of the City's Municipal Code. Payment of these fees would ensure that Project implementation and approval of connection plans would ensure that no additional project-specific environmental effects would occur.

Stormwater

The Project would implement a new on-site stormwater system to offset the increase in impervious surfaces by the Project. The proposed stormwater system would connect to the existing drainage mains along the perimeters of the Project Site and would adequately discharge on-site stormwater in accordance with City's Standard Specifications. The proposed stormwater system would also be constructed per the applicable design requirements of the City's Department of Utilities (DOU) Onsite Design Manual for multi-residential developments.[47] Furthermore, the Project would be required to comply with Chapter 15.88 (Grading, Erosion, and Sediment Control) of the City's Municipal Code, which prohibits development of the proposed project should the project would obstruct, impede, or interfere with the natural flow of existing off-site drainage crossing the Project Site. As such, the Project would not substantially impact the City's existing stormwater drainage facilities, and no additional project-specific environmental effects would occur.

Solid Waste

Implementation of the proposed mixed-use development would result in an increase in on-site solid waste generation. Construction activities associated with the Project would generate solid waste that would be temporary and would cease upon completion of the Project. As discussed in **Appendix A, Air Quality Report,** to this Initial Study, the Project would produce 174.4 tons of solid waste per year (or approximately 0.48 tons per day). Accordingly, the Project would generate less than one percent of the of the daily permitted throughput capacities Sacramento County North Area Recovery and the Sacramento County Kiefer Landfill. Furthermore, the Project would demonstrate compliance with the California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939), which requires all California cities "reduce, recycle, and re-use solid waste generated in the State to the maximum extent feasible." AB 939 requires that at least 50 percent of waste produced is recycled, reduced, or composted. The Project would also comply with the 2022 California Green Building Standards (CALGreen) Code, which includes design and construction measures that help reduce construction-related waste though material conservation and other

---

47 City of Sacramento Department of Utilities, *Onsite Design Manual for Onsite Drainage, Sewer, Water, Stormwater Quality And Erosion And Sediment Control*, May 2020. Available online at: https://www.cityofsacramento.org/-/media/corporate/files/dou/specs-drawings/onsitedesignmanual.pdf?la=en, accessed August 2, 2023.

construction-related efficiency measures. Thus, the Project would not substantially impact the capacities of City's existing solid waste facilities, and no additional project-specific environmental effects would occur.

Dry Utilities

The Project would utilize the existing joint utility poles along the perimeter of the Project Site to provide overhead electrical and telecommunication lines for the proposed mixed-use development. Payment of standard utility connection fees and ongoing user fees would ensure these utility services are able to accommodate the proposed development. Payment of these fees would ensure that no additional project-specific environmental effects would occur.

Mitigation Measures

None required.

Findings

The project would have no additional project-specific environmental effects relating to Utilities and Service Systems.

Issues:	Effect remains significant with all identified mitigation	Effect can be mitigated to less than significant	No additional significant environmental effect
15. MANDATORY FINDINGS OF SIGNIFICANCE			
A.) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐
B.) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐
C.) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐

Answers To Checklist Questions

Questions A through C

A) Effect can be mitigated to less than significant

As concluded in **Section 2**, **Biological Resources**, the Project would not degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or 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.

As discussed in **Section 3, Cultural Resources**, the NCCIC determined that the Project Site has a high potential for locating historic-period cultural resources that could be disturbed by Project implementation. Accordingly, mitigation measures would be required to reduce these impacts to less than significant levels.

B and C) Effect can be mitigated to less than significant

The Project generally would not contribute to potentially cumulatively considerable impacts. As indicated in the above analysis, with implementation of the required mitigation measures, the Project would not result in any unmitigated significant adverse impacts and/or cumulatively considerable impacts. The Project does not include any unmitigated cumulatively considerable impacts when considered in connection with the effects of past, present and probable future projects. No further analysis is necessary.

IV. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be affected by this project.

	Aesthetics	X	Hazards
	Air Quality		Noise
	Biological Resources		Public Services
X	Cultural Resources		Recreation
	Energy and Mineral Resources	X	Transportation/Circulation
	Geology and Soils	X	Tribal Cultural Resources
X	Greenhouse Gas Emissions		Utilities and Service Systems
	Hydrology and Water Quality		None Identified

V. DETERMINATION

On the basis of the initial study:

Note: The applicable paragraph should be included, and the others deleted. Questions regarding the findings should be directed to the environmental project planner.

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; and (c) the proposed project will not have any project-specific additional significant environmental effects not previously examined in the Master EIR, and no new mitigation measures or alternatives will be required. Mitigation measures from the Master EIR will be applied to the proposed project as appropriate. Notice shall be provided pursuant to *CEQA Guidelines* Section 15087 (*CEQA Guidelines* Section 15177(b)).

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A Mitigated Negative Declaration will be prepared. Mitigation measures from the Master EIR will be applied to the project as appropriate, and additional feasible mitigation measures and alternatives will be incorporated to revise the proposed project before the negative declaration is circulated for public review, to avoid or mitigate the identified effects to a level of insignificance. (*CEQA Guidelines* Section 15178(b))

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. A focused EIR shall be prepared which shall incorporate by reference the Master EIR and analyze only the project-specific significant environmental effects and any new or additional mitigation measures or

alternatives that were not identified and analyzed in the Master EIR. Mitigation measures from the Master EIR will be applied to the project as appropriate. (*CEQA Guidelines* Section 15178(c))

I find that (a) the proposed project is an anticipated subsequent project identified and described in the 2035 General Plan Master EIR; (b) the proposed project is consistent with the 2035 General Plan land use designation and the permissible densities and intensities of use for the project site; (c) that the discussions of cumulative impacts, growth inducing impacts, and irreversible significant effects in the Master EIR are not adequate for the proposed project; and (d) the proposed project will have additional significant environmental effects not previously examined in the Master EIR. An EIR shall be prepared, which shall tier off of the Master EIR to the extent feasible. (*CEQA Guidelines* Section 15178(e))

Ron Bess

Signature

November 9, 2023

Date

Ron Bess

Printed Name

VI. REFERENCES CITED

CalFire. *Sacramento County State Responsibility Area Fire Hazard Severity Zones.* November 2022. Available online at: https://osfm.fire.ca.gov/media/2x4l31tk/fhsz_county_sra_11x17_2022_sacramento_ada.pdf, accessed May 12, 2023.

California Department of Conservation, *Mineral Land Classification Map of Concrete Aggregate in the Greater Sacramento Area Production-Consumption Region*. 2018. Available online at: https://www.conservation.ca.gov/cgs/Documents/Publications/Special-Reports/SR_245-MLC-SacramentoPCR-2018-Plate01-a11y.pdf, accessed on May 12, 2023.

California Department of Conservation. "Earthquake Zones of Required Investigation." Available online at: https://maps.conservation.ca.gov/cgs/EQZApp/app/ . accessed on May 30, 2023

California Department of Conservation. "Fault Activity Map of California." Available online at: https://maps.conservation.ca.gov/cgs/fam , accessed May 30, 2023.

California Department of Conservation. "Important Farmland Finder." Available online at: https://maps.conservation.ca.gov/dlrp/ciff/ , accessed May 12, 2023.

California Department of Conservation. "Los Angeles County Tsunami Hazard Areas." Available online at: https://www.conservation.ca.gov/cgs/tsunami/maps/los-angeles , accessed May 31, 2022.

California Department of Conservation. "Mines Online." Available online at: https://maps.conservation.ca.gov/mol/index.html , accessed on May 12, 2023.

California Department of Finance Demographic Research Unit. *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark*. May 2022.

California Department of Fish and Wildlife. "BIOS 6." Available online at: https://apps.wildlife.ca.gov/bios6/, accessed May 30, 2023.

California Department of Water Resources. "California Dam Breach Inundation Maps." Available online at: https://fmds.water.ca.gov/maps/damim/, accessed May 31, 2022.

CalRecycle. "SWIS Facility/Site Activity Details- North Area Transfer Station (34-AA-0002)." Available online at: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2071?siteID=2508, accessed July 20, 2023.

City of Sacramento, Department of Utilities. *Onsite Design Manual for Onsite Drainage, Sewer, Water, Stormwater Quality And Erosion And Sediment Control.* May 2020. Available online at: https://www.cityofsacramento.org/-/media/corporate/files/dou/specs-drawings/onsitedesignmanual.pdf?la=en, accessed August 2, 2023.

City of Sacramento. "Drainage Basins." Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Specs-Drawings/DRAINAGE_BASINS_11-2015.pdf?la=en, accessed May 31, 2023.

City of Sacramento. "Youth, Parks, and Community Enrichment." Available https://www.cityofsacramento.org/ParksandRec, accessed on June 1, 2023.

City of Sacramento. *2020 Urban Water Management Plan*. May 2021. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/DOU/Reports/R---038---City-of-Sacramento-Draft-2020-UWMP---05-18-21.pdf?la=en, accessed May 31, 2023.

City of Sacramento. *2035 General Plan Background Report*. March 2015. Available online at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-4---Utilities.pdf?la=en, accessed July 20, 2023.

City of Sacramento. *2035 General Plan, Public Health and Safety*. March 2015. Available online at: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Chapter-7---Public-Health-and-Safety.pdf?la=en, accessed May 30, 2023.

City of Sacramento. *Emergency Operations Plan*. 2018. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/Emergency-Services/2018-City-of-Sacramento-Emergency-Operations-Plan.pdf?la=en, accessed May 12, 2023.

City of Sacramento. "Fire Department." Availebl online at: https://www.cityofsacramento.org/fire, accessed June 1, 2023.

City of Sacramento. *General Plan Master EIR*. 2014

City of Sacramento. "Landmark, Historic Districts, and Cultural Resources Listings." Available online at: https://www.cityofsacramento.org/Community-Development/Planning/Urban-Design/Preservation/Sacramento-Register, accessed July 17, 2023.

City of Sacramento. *North Sacramento Community Plan*. March 2015. Available online at: https://www.cityofsacramento.org/~/media/Corporate/Files/CDD/Planning/Community%20Plans/North%20Sacramento.pdf, accessed on May 26, 2023.

Federal Emergency Management Agency. "Flood Map for 06067C0068H." Available online at: https://msc.fema.gov/portal/downloadProduct?productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06067C0068H, accessed May 31, 2023.

Historic Aerials. "Aerial Viewer." Available online at: https://www.historicaerials.com/viewer, accessed on May 30, 2023.

International Code Council, Digital Codes. *2022 California Building Code*. July 2022. Available online at: https://codes.iccsafe.org/content/CABC2022P1, accessed November 3, 2023.

Office of the State Fire Marshal. Sacramento County. State Responsibility Area.

Ramcon Engineering and Environmental Contracting. *Underground Tank Removal Report*. June 19, 2023. Available online at: https://documents.geotracker.waterboards.ca.gov/regulators/deliverable_documents/8850248038/RO0001736_UST_061923.pdf, accessed July 31, 2023.

Sacramento Area of Official Governments. "Williamson Act Parcels." Available online at: https://data.sacog.org/datasets/199810930ef9465a9a1ae0315e5a7535_0/explore?location=38.377321%2C-121.419280%2C10.39, accessed May 12, 2023.

SCA Environmental, Inc., *Limited Phase II Environmental Site Assessment Report 3201 Marysville Blvd Sacramento, CA, 95815*. March 25, 2022.

SCA Environmental, *Supplemental Site Investigation Report – Test Pit Explorations 3201 Marysville Boulevard, Sacramento, CA- Local Oversight Program Site No. G159; RO0001736*. Available online at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/1676299691/T10000018696.PDF , accessed May 30, 2023.

SCA Environmental, *Work Plan – Test Pit Explorations 3201 Marysville Boulevard, Sacramento, CA*. Available online at: https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/8327015578/T10000018696.PDF, accessed May 30, 2023.

Sacramento Metropolitan Air Quality Management District. *SMAQMD Thresholds of Significance Table*. April 2020. Available online at: https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf, accessed November 3, 2023.

Twin Rivers School District. *School Facility Fee Justification Report For Residential, Commercial, and Industrial Development Projects*. April 2016. Available online: https://www.twinriversusd.org/documents/Operations/General%20Services/Developer%20Fee/Twin_Rivers_-_Level_I_2016_FINAL_2016-03-30.pdf, accessed June 1, 2023.

Twin Rivers Unified School District. "Home Page." Available online at: https://www.twinriversusd.org/, accessed June 1, 2023.

U.S. Geological Survey. "Areas of Land Subsidence in California." Available online at: https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html, accessed May 30, 2023.

United States Department of Agriculture. Natural Resources Conservation Service. "WebSoil Survey." Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx, accessed May 30, 2023.

APPENDIX A

Air Quality Report

Sacramento Mixed-Use Apartments Project

Air Quality Report

August 2023

IMPACT SCIENCES

Prepared for:

City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

Prepared by:

Impact Sciences, Inc.
811 W. 7th Street, Suite 200
Los Angeles, CA 90017

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

This Air Quality Technical Report evaluates air quality impacts associated with the proposed project located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive (Project) in the City of Sacramento (City). This report has been prepared by Impact Sciences, to support the Project's environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA) for the City. This analysis considers both the temporary air quality impacts from Project construction and long-term impacts associated with operation of the Project.

1.1 PROJECT LOCATION

The Project Site located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive is approximately 1.51 acres and is comprised of 7 parcels (APNs: 251-0325-004, 251-0325-005, 251-0325-006, 251-0325-008, 251-0325-009, 251-0325-010, and 251-0325-011). The Project Site is within the North Sacramento Community Plan Area and is bound by Arcade Boulevard to the south, Marysville Boulevard to the east, and Ermina Drive to the west and north. The Project Site is approximately 215 feet south of Arcade Creek and 350 feet south of Hagginwood Park.

The Project Site currently contains two vacant buildings on the parcel located on the south end of the Project Site at 3201 Marysville Boulevard (APN: 251-0325-006). The remaining six parcels to the north are vacant. The Project Site is generally surrounded by commercial uses, including a laundromat, health center, tire shop, mechanics shop, market, and accountant office. There are three single-family residential uses north of the Project Site across Ermina Drive, and two single-family residential uses west of the Project Site across Ermina Drive. The Project Site is located within the North Sacramento Community Plan Area and is designated as a Suburban Corridor in the 2035 Land Use and Urban Form map. The Project Site and its surrounding parcels are currently zoned General Commercial (C-2). See **Figure 1, Aerial Photograph of the Project Site**.

1.2 PROJECT DESCRIPTION

The applicant proposes to demolish two existing one-story vacant buildings (approximately 1,548 square feet of demolition) and construct a new mixed-use building (approximately 125,501 square feet) with ground floor commercial, parking garage, and four floors of apartments located above ("Project"). See **Figure 2** through **Figure 6**, for the Project Site Plans**.** The mixed-use development would include ground floor retail, coffee, or restaurant uses with public plazas for outdoor dining, and amenities, utilities, and parking spaces for the above apartments. The apartments would be located on floors two through five and include a mix of one- and two-bedroom units.

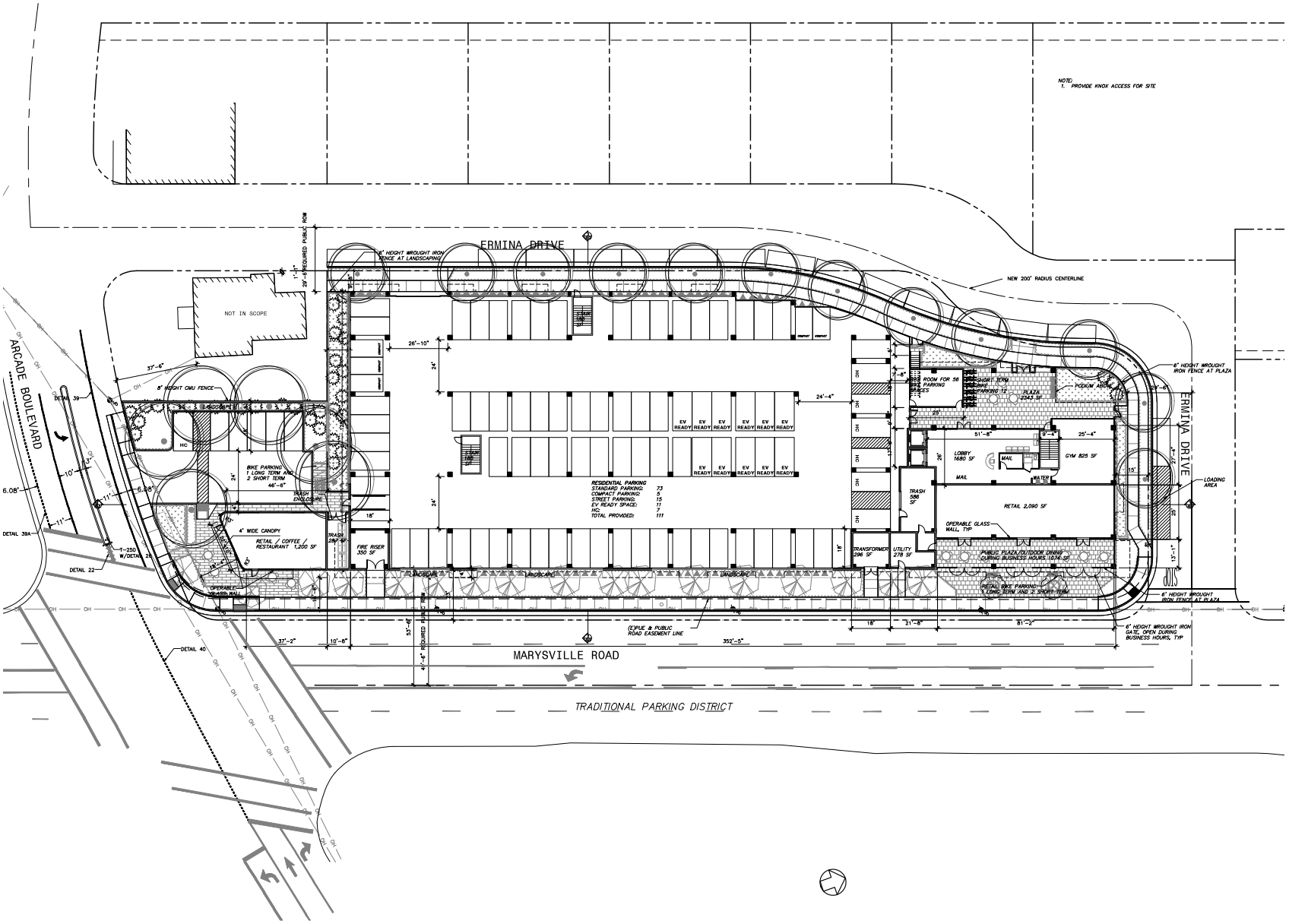
SOURCE: Esri, 2023

FIGURE 1

IMPACT SCIENCES

Aerial Photograph of the Project Site

1338.001•08/2023



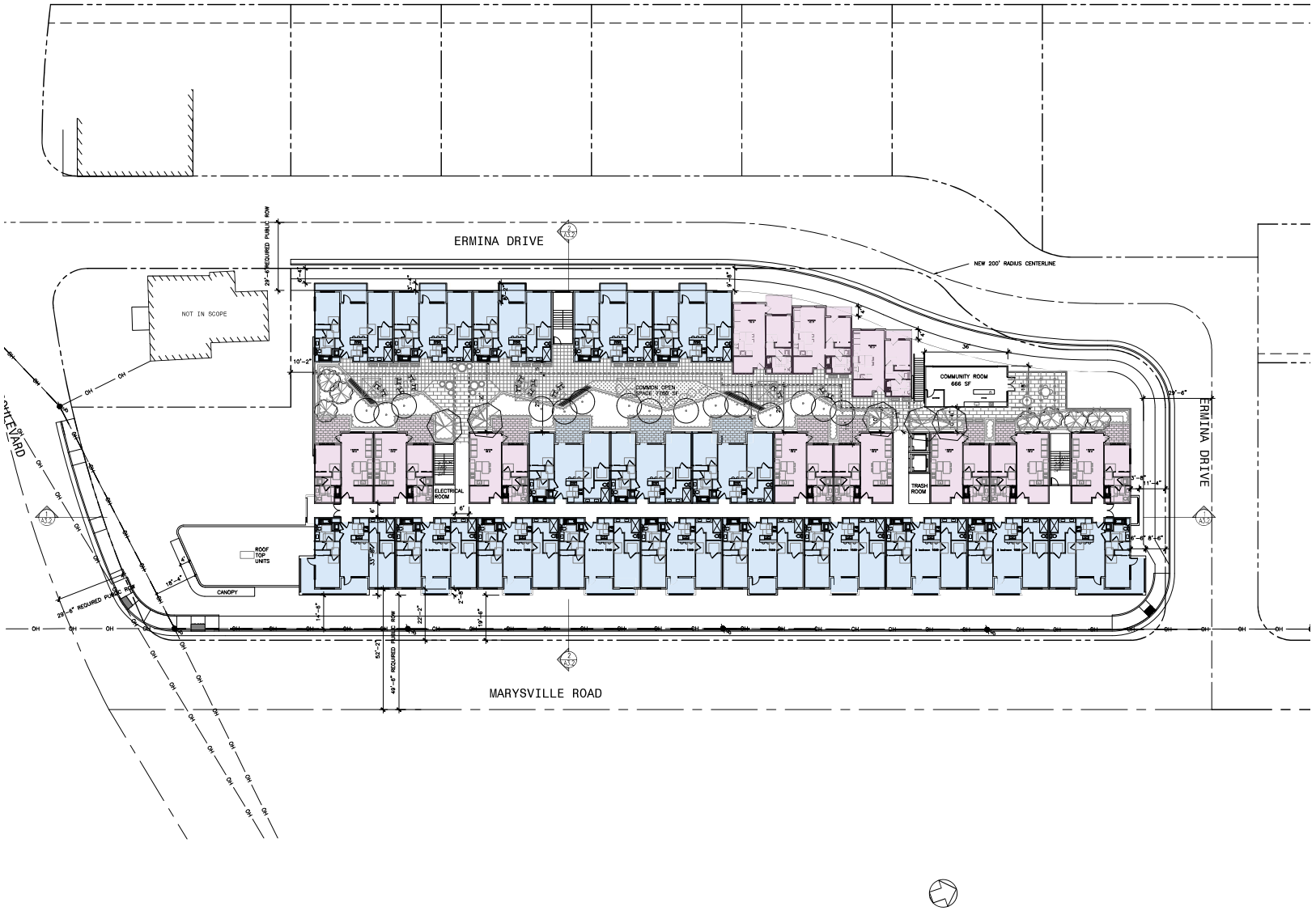
SOURCE: SCDC, 2023

FIGURE **2**

IMPACT SCIENCES

First Floor Plan

1338.001•08/2023



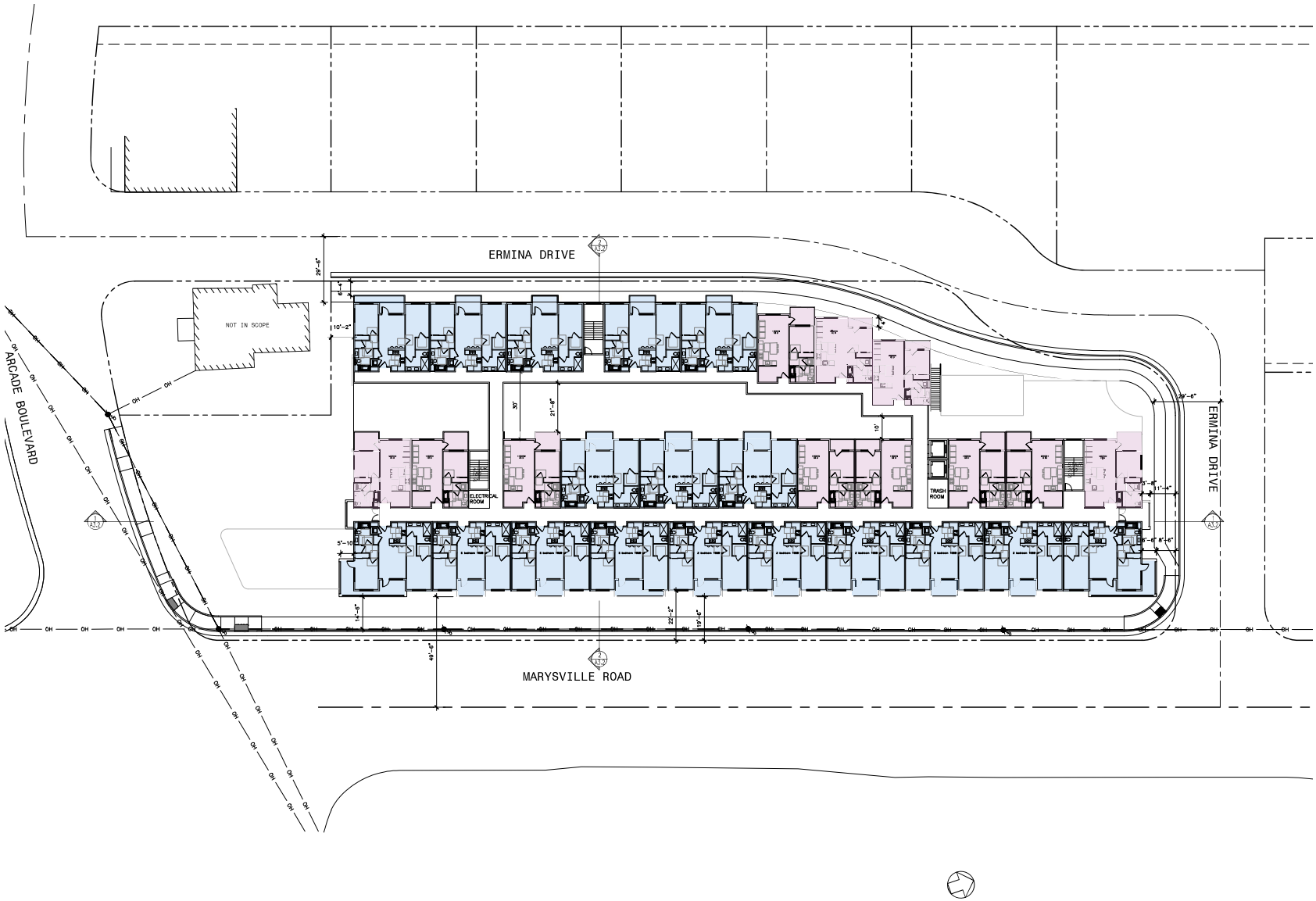
SOURCE: SCDC, 2023

FIGURE **3**

IMPACT SCIENCES

Second Floor Plan

1338.001•08/2023



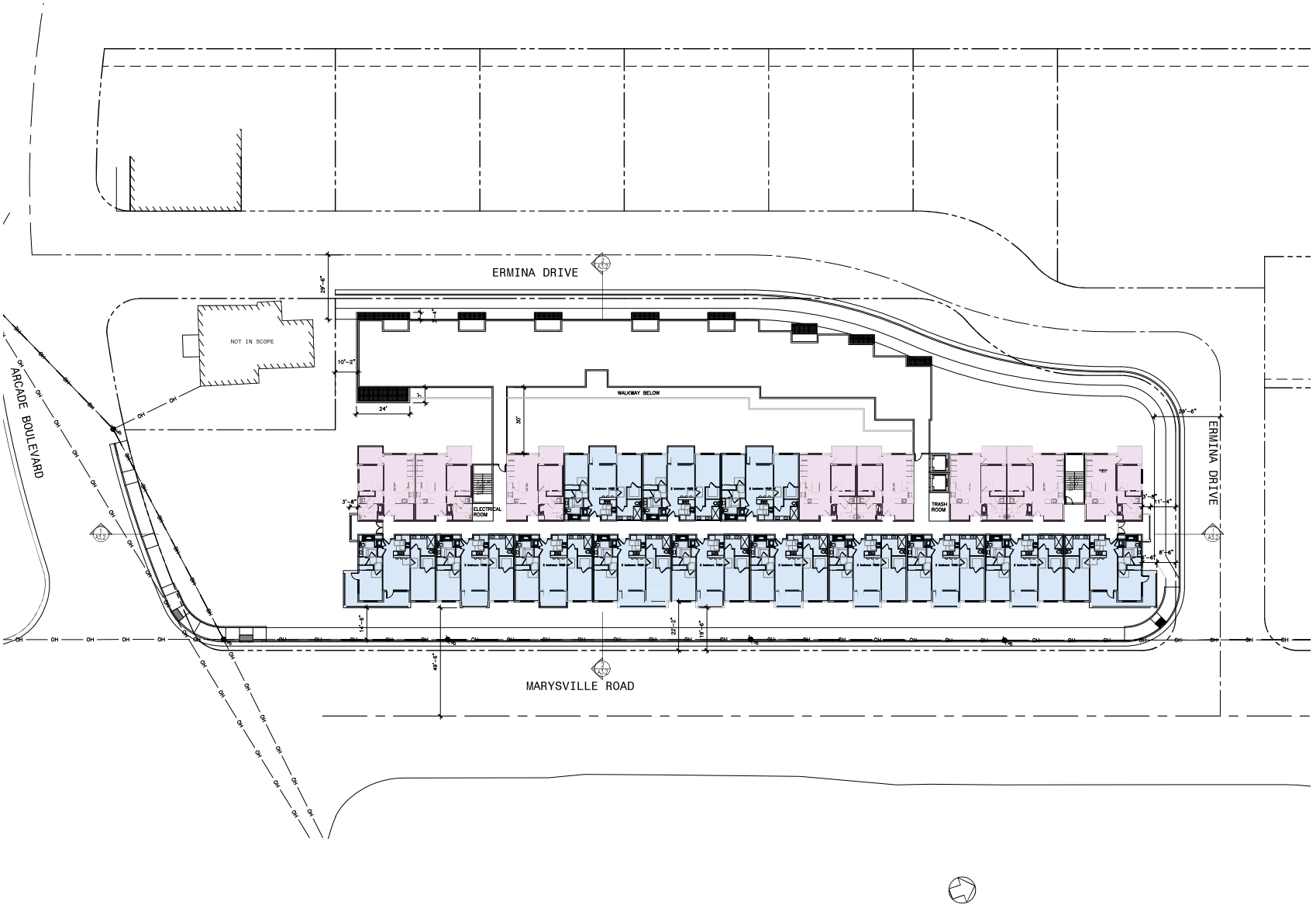
SOURCE: SCDC, 2023

FIGURE **4**

IMPACT SCIENCES

Third and Fourth Floor Plan

1338.001•08/2023



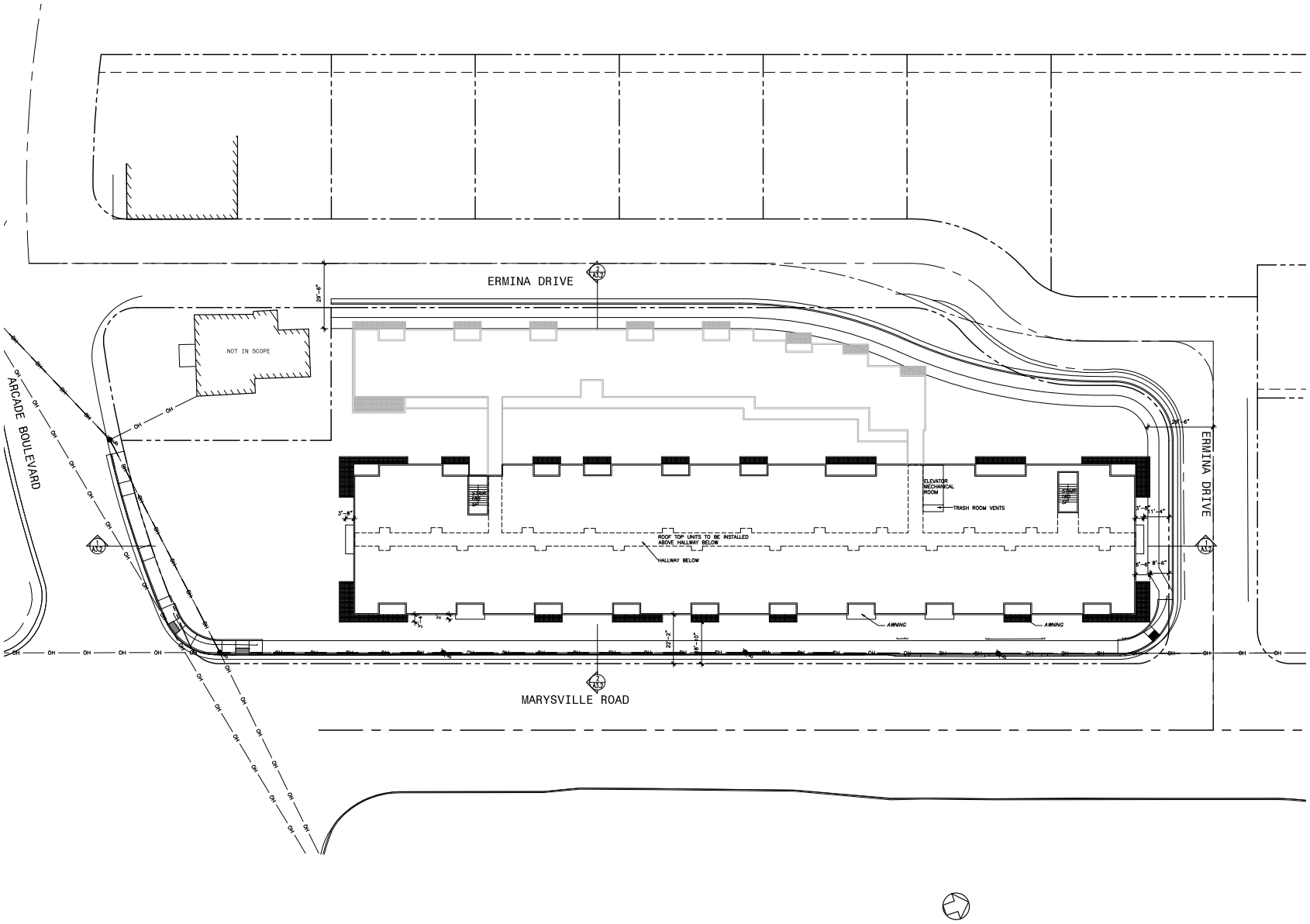
SOURCE: SCDC, 2023

FIGURE **5**

IMPACT SCIENCES

Fifth Floor Plan

1338.001•08/2023



SOURCE: SCDC, 2023

FIGURE 6

IMPACT SCIENCES

Roof Floor Plan

1338.001•08/2023

2.0 ENVIRONMENTAL SETTING

2.1 AIR QUALITY SETTING

Sacramento Valley Air Basin

The Project Site is located within the Sacramento Valley Air Basin (SVAB), which is a valley bounded by the North Coast Mountain Ranges to the west and the Northern Sierra Nevada Mountains to the east. The terrain in the valley is flat and approximately 25 feet above sea level.

Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley. Throughout the year, daily temperatures may range by 20 degrees Fahrenheit with summer highs often exceeding 100 degrees and winter lows occasionally below freezing. Average annual rainfall is about 20 inches and snowfall is very rare. Summertime temperatures are normally moderated by the presence of the "Delta breeze" that arrives through the Carquinez Strait in the evening hours.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants in the valley. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells lie over the valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating reduces the influx of outside air and allows air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap cooler air and pollutants near the ground.

The warmer months in the SVAB (May through October) are characterized by stagnant morning air or light winds, and the Delta breeze that arrives in the evening out of the southwest. Usually, the evening breeze transports a portion of airborne pollutants to the north and out of the Sacramento Valley. During about half of the day from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern to circle back south. This phenomenon exacerbates the pollution levels in the area and increases the likelihood of violating Federal or State standards. The Schultz Eddy normally dissipates around noon when the Delta breeze begins.

Air Pollutants of Concern

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons such as children, pregnant women, and the

elderly, from illness or discomfort. Criteria air pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter ten microns or less in diameter (PM10), and lead (Pb). Note that reactive organic gases (ROGs), which are also known as reactive organic compounds (ROCs) or volatile organic compounds (VOCs), and nitrogen oxides (NOx) are not classified as criteria pollutants. However, ROGs and NOx are widely emitted from land development projects and participate in photochemical reactions in the atmosphere to form O_3; therefore, NOx and ROGs are relevant to the Proposed Project and are of concern in the Basin. As such, they are listed below along with the criteria pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 1, Criteria Pollutants Summary of Common Sources and Effects**.

Table 1
Criteria Pollutants Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuels is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include moto vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM10 & PM2.5)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant; aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: CAPCOA, Health Effects. Available: http://www.capcoa.org/health-effects/

2.2 AMBIENT AIR QUALITY

Criteria Air Pollutant Monitoring Data

Ambient air quality in Sacramento can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections are documented by measurements made by the Sacramento Metropolitan Air Quality Management District (SMAQMD), the air pollution regulatory agency in the Basin. The SMAQMD maintains six active air quality monitoring stations which process ambient air quality measurements throughout the Basin.

The purpose of the monitoring station is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Ozone and particulate matter (PM10 and PM2.5) are pollutants of particular concern in the Basin. The monitoring station located closest to the Project Site and most representative of air quality is CARB No. 34295, Sacramento-Del Paso Manor, located at 2701 Avalon Drive, in Sacramento CA. Ambient emission concentrations vary due to localized variations in emissions sources and climate and should be considered "generally" representative of ambient concentrations near the Project Site. See **Table 2, Air Monitoring Station Ambient Pollutant Concentrations**.

Table 2
Air Monitoring Station Ambient Pollutant Concentrations

Pollutant	Standards[1]	Year 2019	Year 2020	Year 2021
Ozone (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.087	0.120	0.110
Maximum 8-hour concentration monitored (ppm)		0.069	0.085	0.091
Number of days exceeding state 1-hour standard	0.09 ppm	0	4	7
Number of days exceeding federal/state 8-hour standard	0.070 ppm	0 / 0	0 / 10	0 / 18
Particulate Matter (PM2.5)				
Maximum 24-hour concentration monitored (µg/m³)		41.4	147.3	95.4
Annual average concentration monitored (µg/m³)		NA	NA	9.6
Number of samples exceeding federal standard	35 µg/m³	3.0	28.1	5.0
Particulate Matter (PM10)				
Maximum 24-hour concentration monitored (µg/m³)		110.4	190.0	63.0
Annual average concentration monitored (µg/m³)		NA	NA	NA
Number of samples exceeding federal standard	35 µg/m³	NA	6.1	NA

Source: Air Resources Board. Air Quality Data Statistics. Available at: Select 8 Summary-First Steps (ca.gov), accessed August 2023.
NA = not available
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air (µg/m³), or annual arithmetic mean (aam).*
[2] *The 8-hour federal O_3 standard was revised from 0.075 ppm to 0.070 ppm in 2015. The statistics shown are based on the 2015 standard of 0.070 ppm.*

The attainment status for the Basin region is included in **Table 3, Attainment Status of Criteria Pollutants in the Sacramento Valley Air Basin**. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Basin region is designated as a nonattainment area for federal ozone, PM10, and PM2.5 and is designated as nonattainment for state ozone, PM10, and PM2.5 standards.

Table 3
Attainment Status of the Sacramento Valley Air Basin

Pollutant	State	Federal
Ozone (O_3)	Non-Attainment	Non-Attainment
Particulate Matter (PM10)	Non-Attainment	Attainment
Particulate Matter (PM2.5)	Non-Attainment	Non-Attainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment

Source: CARB. 2022. Maps of State and Federal Area Designations. Maps of State and Federal Area Designations | California Air Resources Board, accessed August 2023.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds.[1]

CARB identified diesel particulate matter (DPM) as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particulates and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.[2]

Residential areas are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to health effects of air pollution due to their immature immune systems and developing organs.[3] As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. The closest air

---

1 California Air Resources Board, "CARB Identified Toxic Air Contaminants," Available online at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, accessed August 16, 2023.

2 California Air Resources Board. "Sensitive Receptor Assessment," Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment.

3 Office of Environmental Health Hazard Assessment and The American Lung Association of California, *Air Pollution and Children's Health – A Fact Sheet by OEHHA and the American Lung Association*, 2003. Available online at: https://oehha.ca.gov/air/air-pollution-and-childrens-health-fact-sheet-oehha-and-american-lung-association accessed August 2023.

quality sensitive receptors are single-family residences located 35 feet to the west and to the north of the Project Site, the Good Samaritan Church of God/the Hagginwood Academy for Children located 50 feet to the east of the Project Site, single-family residences located 135 feet from the southeast corner of the Project Site, and a single-family residence 125 feet from the southwest corner of the Project Site. See **Figure 7, Sensitive Receptor Map.**

SOURCE: Esri, 2023

FIGURE 7

IMPACT SCIENCES

Sensitive Receptor Map

1338.001•08/2023

3.0 REGULATORY FRAMEWORK

3.1 FEDERAL

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The U.S. EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for nonattainment or attainment designations. **Table 3** lists the federal attainment status of the Basin for the criteria pollutants.

National Emissions Standards for Hazardous Air Pollutants Program

Under federal law, 187 substances are currently listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The U.S. EPA is establishing regulatory schemes for specific source categories and requires implementation of the Maximum Achievable Control Technologies (MACT) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem is California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

National Ambient Air Quality Standards

The federal CAA required the U.S. EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants**.** Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings. A summary of the federal ambient air quality standards is shown in **Table 4, National Ambient Air Quality Standards**.

Table 4
National Ambient Air Quality Standards

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 μg/m^3
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	0.053 ppm
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate Matter	PM2.5	Primary	Annual	12 μg/m^3
		Secondary	Annual	15 μg/m^3
		Primary and secondary	24 hours	35 μg/m^3
	PM10	Primary and secondary	24 hours	150 μg/m^3
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

Source: California Air Resources Board. May 2016. Ambient Air Quality Standards. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

3.2 STATE

California Clean Air Act of 1988

The California CAA of 1988 (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. The CCAA, amended in 1992, requires all air quality management districts (AQMDs) in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants and has also established state standards for sulfates, hydrogen sulfide,

vinyl chloride, and visibility-reducing particles, for which there are no national standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards. California has also set standards for some pollutants that are not addressed by federal standards. The state standards for ambient air quality are summarized in **Table 5, California Ambient Air Quality Standards**.

Table 5
California Ambient Air Quality Standards

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 μg/m^3
Nitrogen dioxide		1 hour	0.180 ppm
		Annual	0.030 ppm
Ozone		8 hours	0.070 ppm
		1 hour	0.09 ppm
Particulate matter	PM2.5	Annual	12 μg/m^3
	PM10	24 hours	50 μg/m^3
		Annual	20 μg/m^3
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 μg/m^3
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm

Source: California Air Resources Board. May 2016. Ambient Air Quality Standards. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically

modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. The SMAQMD has developed Air Quality Attainment Plans (AQAPs) which present comprehensive strategies to reduce volatile organic compounds NOx, PM10, and PM2.5 emissions from stationary, area, mobile, and indirect sources to achieve attainment status of the NAAQS and CAAQS. Current planning efforts from the SMAQMD include the Redesignation Substitution 1979 Ozone Standard, the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan. See below for further discussion.

California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by EPA as hazardous air pollutants and by CARB as TACs. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.[4]

[4] Diesel exhaust is included within pollutants subject to the hotspot program. Please refer to OEHHA's Air Toxics Hot Spot Program Risk Assessment Guidelines. Available online at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0, accessed August 16, 2023.

In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes including greater age sensitivity in particular for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits. Regardless of the change in calculation methodology, actual emissions and cancer risk within South Coast Air Basin has declined by more than 50% since 2005.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of a Health Risk Assessment (HRA). HARP2, an update to HARP, was released in March 2015. HARP2 has a more refined risk characterization in HRA and CEQA documents and incorporates the 2015 OEHHA Final Guidance.

3.3 REGIONAL

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento region. In addition to the City and County of Sacramento, its members include the counties of El Dorado, Placer, Sutter, Yolo, and Yuba, and 22 cities within these counties.

SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air and airport land uses.

SACOG must also ensure that their transportation plans do not conflict with any Sacramento Management Air Quality Management District (SMAQMD) air quality plans. This is known as making a "finding of conformity." Consequently, SACOG's long range transportation plans must show that they will not create traffic increases that would cause vehicle emissions that would exceed the motor vehicle emission budget (MVEB) set by the SMAQMD in their most recent plan. If SACOG's plan does not meet the conformity criteria, a "conformity lapse" could occur where Federal funding for transportation projects is restricted.[5]

---

5 City of Sacramento, *Sacramento 2035 General Plan Background Report*, 2014. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/Apdx-C_SacGP_BR_Reduced.pdf?la=en, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the regional agency responsible for the air quality regulation within Sacramento County. The agency regulates air quality through its planning and review activities and has permit authority over most types of stationary emission sources and can require operators of stationary sources to obtain permits, can impose emission limits, set fuel or material specifications, and establish operational limits to reduce air emissions. SMAQMD regulates new or modified stationary sources of Criteria Air Pollutants and TACs. All areas designated as nonattainment are required to prepare a plan or plans showing how the area would meet the air quality standards by its attainment dates. The SMAQMD has prepared the following air quality plans in order to meet federal attainment status.

- Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan[6]
- SMAQMD's Triennial Report and Air Quality Plan Revision[7]
- PM10 Implementation/Maintenance Plan and Redesignation Request for Sacramento County[8]
- PM2.5 Maintenance Plan and Redesignation Request[9]
- 2004 Revision to the California State Implementation Plan for CO[10]

---

6 Sacramento Metropolitan Air Quality Management District, *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions)*, 2013. Available online at: https://www.airquality.org/ProgramCoordination/Documents/4)%202013%20SIP%20Revision%20Report%201997%20Std.pdf, accessed August 16, 2023.

7 Sacramento Metropolitan Air Quality Management District, *Triennial Report and Air Quality Plan Revision*, May 28, 2015. Available online at: https://www.airquality.org/ProgramCoordination/Documents/11)%20%202015TriennialReportandProgressRevision.pdf, accessed August 16, 2023.

8 Sacramento Metropolitan Air Quality Management District, *PM10 Implementation/Maintenance Plan and Redesignation Request for Sacramento County*, October 28, 2010. Available online at: https://www.airquality.org/ProgramCoordination/Documents/10)%20%20PM10%20Imp%20and%20MP%202010.pdf, accessed August 16, 2023.

9 Sacramento Metropolitan Air Quality Management District, *PM2.5 Implementation/Maintenance Plan and Redesignation Request for Sacramento PM2.5 Nonattainment Area*, October 24, 2013. Available online at: https://www.airquality.org/ProgramCoordination/Documents/PM2.5%20Imp%20and%20Redesignation%202013.pdf, accessed August 16, 2023.

10 Sacramento Metropolitan Air Quality Management District, *2004 Revision to the California State Implementation Plan for Carbon Monoxide*, July 22, 2004. Available online at: https://www.airquality.org/ProgramCoordination/Documents/1)%202004%20CO%20Maintenance%20Plan.pdf, accessed August 16, 2023.

The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SMAQMD rules and regulations in effect at the time of construction.

SMAQMD Rules and Regulations

The following is a list of noteworthy SMAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201 (General Permit Requirements).** Requires any business or person to obtain an authority to construct and a permit to operate prior to installing or operating new equipment or processes that may release or control air pollutants to ensure that all SMAQMD rules and regulations are considered.

- **Rule 401 (Ringelmann Chart/Opacity).** Limits the discharge pollutants darker in color than shade No. 1 on the Ringlemann Chart or that obscure a human observers view.

- **Rule 402 (Nuisance).** Prohibits discharge from any source whatsoever where such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

- **Rule 403:** Fugitive Dust. Controls dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site. Fugitive dust controls include the following:

  - Water all exposed surfaces two times daily.

  - Cover or maintain at least two feet of free board on haul trucks transporting soil, sand, or other loose material on the site.

  - Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day.

  - Limit vehicle speeds on unpaved roads to 15 miles per hour.

- All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes.

- Maintain all construction equipment in proper working condition according to manufacturer's specifications.

- **Rule 420 (Sulfur Content of Fuels).** Limits emissions of sulfur compounds from fuel combustion to 1.14 grams per cubic meter of gaseous fuel.

- **Rule 442 (Architectural Coatings).** Imposes limits on the VOC content of architectural coatings within the SMAQMD. The Rule also includes regulations for painting practices, thinning, and use of rust preventative coatings and lacquers.

- **Rule 453 (Cutback and Emulsified Asphalt Paving Materials).** Prohibits the use of rapid or medium cure cutback asphalt and certain slow cure cutback asphalt. This rule also prohibits the use of certain emulsified asphalt containing organic compounds that evaporate at 260 degrees Celsius.

3.4 LOCAL

North Sacramento Community Plan

The Project Site is within the City's North Sacramento Community Plan area. The Community Plan, adopted alongside the City of Sacramento 2035 General Plan Update, establishes the community's vision, acknowledges community issues, and establishes policies to improve the community. Policies that are relevant to the Project are listed below:[11]

NS.LU 1.1 **Development North of Business 80.** The City shall encourage development north of Business 80 in a manner which emphasizes neighborhood cohesiveness and variety of housing types.

[11] City of Sacramento, *North Sacramento Community Plan*, 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/North-Sacramento.pdf?la=en, accessed August 16, 2023.

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan was adopted in March 2015, and guides the City in the implementation of creating a sustainable city through goals, policies, and implementation programs.[12] The General Plan's Citywide Goals and Polices tab contains an Environmental Resources section, which contains an Air Quality and Climate Change Chapter that establishes policies to improve air quality and reduce greenhouse gases. The following policies are relevant to the Project:

Policies

ER 6.1.1 **Maintain Ambient Air Quality Standards.** The City shall work with the California Air Resources Board and the Sacramento Metropolitan Air Quality Management District (SMAQMD) to meet State and Federal ambient air quality standards in order to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution.

ER 6.1.2 **New Development.** The City shall review proposed development projects to ensure projects incorporate feasible measures that reduce construction and operational emissions for reactive organic gases, nitrogen oxides, and particulate matter (PM10 and PM2.5) through project design.

ER 6.1.3 **Emissions Reduction**. The City shall require development projects that exceed SMAQMD ROG and NOX operational thresholds to incorporate design or operational features that reduce emissions equal to 15 percent from the level that would be produced by an unmitigated project.

ER 6.1.4 **Sensitive Uses.** The City shall coordinate with SMAQMD in evaluating exposure of sensitive receptors to toxic air contaminants and will impose appropriate conditions on projects to protect public health and safety.

ER 6.1.10 **Coordination with SMAQMD**. The City shall coordinate with SMAQMD to ensure projects incorporate feasible mitigation measures to reduce GHG emissions and air pollution if not already provided for through project design.

---

[12] City of Sacramento, *Environmental Resources – Air Quality and Climate Change Section of the City of Sacramento 2035 General Plan*, 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Environmental-Resources.pdf?la=en, accessed August 16, 2023.

4.0 AIR QUALITY ANALYSIS

4.1 THRESHOLDS AND METHODOLOGY

Thresholds of Significance

The impact analysis provided below is based on the application of the following *State CEQA Guidelines* Appendix G, which indicates that a Project would have a significant impact on air quality if it would:

1. Conflict with or obstruct implementation of any applicable air quality plan.

2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.

3. Expose sensitive receptors to substantial pollutant concentrations.

4. Result in other emissions (such as those leading to odors), adversely affecting a substantial number of people.

The *State CEQA Guidelines* (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the Project are, therefore, evaluated according to thresholds developed by the SMAQMD, which are discussed below.

Consistency with the Applicable AQAP

The SMAQMD relies on its Guide to Air Quality Assessment in Sacramento County (CEQA Guide) to help achieve and maintain all air quality standards as relevant to land use projects.[13] Demonstration of the Project's conformity with all applicable thresholds of significance and best management practices described by SMAQMD's CEQA Guide indicates compliance with the regional attainment plans. The Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Plan) and the Triennial Report and Plan Revision are the current plan required by U.S. EPA and CARB and issued by SMAQMD to meet attainment. These plans demonstrate reasonable progress towards attainment as required by the SIP and CCAA. To demonstrate compliance of the Project with the plans there needs to be appropriate conformity analysis of land use assumptions and travel demand. The SMAQMD recommends comparing the project's VMT and population growth rate to the Sacramento Area Council of Government's

[13] Sacramento Metropolitan Air Quality Management District, "Guide to Air Quality Assessment," 2021. Available online at: https://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools, accessed August 16, 2023.

(SACOG) growth project included in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

In addition to the analysis of the Project compared to the MTP/SCS, the Project does not exceed regional significance thresholds for temporary construction activities and long-term project operation in the Basin, shown in **Table 6, SMAQMD Regional Significance Thresholds**. The quantitative analysis of the Project against these thresholds is discussed under **AQ Impact 2.** The SMAQMD has established a zero-emissions threshold for PM10 and PM2.5, requiring that all construction projects implement SMAQMD's Basic Construction Emission Control Practices to control PM10 and PM2.5. With the implementation of SMAQMD's best management practices (BMPs), SMAQMD's maximum daily and annual thresholds increase to 80 pounds per day and 14.6 tons per year of PM10 and 82 pounds per day and 15 tons per year of PM2.5. These BMPs include:

- Controlling fugitive dust as required by District Rule 403 and enforced by District staff.
- Watering all exposed surfaces two times daily.
  - Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Covering or maintaining at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Using wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limiting vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Requiring all roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.[14]

[14] Sacramento Metropolitan Air Quality Management District, Basic Construction Emission Control Practices, 2019. Available online at: https://www.airquality.org/LandUseTransportation/Documents/Ch3BasicEmissionControlPracticesBMPSFinal7-2019.pdf, accessed August 16, 2023.

Table 6
Sacramento Metropolitan AQMD Air Quality Significance Thresholds

All Projects Subject to CEQA		
	Construction Phase	**Operational Phase**
Mass Emission Thresholds		
NOx (ozone precursor)	85 lbs/day	65 lbs/day
ROG (VOC) (ozone precursor)	None	65 lbs/day
PM10	0[a]	0[a]
PM2.5	0[b]	0[b]
Concentration Thresholds (based on the California Ambient Air Quality Standard, identical threshold for both phases of development)		
CO	20 ppm 1-hour standard (23 mg/m3); 9 ppm 8-hour standard (10 mg/m3)	
NO_2	0.18 ppm 1-hour standard (339 μg/m3); 0.03 ppm Annual Arithmetic Mean (57 μg/m3)	
SO_2	0.25 ppm 1-hour standard (665 μg/m3); 0.04 ppm 24-hour standard (105 μg/m3)	
Lead	1.5 μg/m3 30-day average	
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent	
Sulfates	25 μg/m3 24-hour standard	
H_2S	0.03 ppm (42 μg/m3) 1-hour standard	
Vinyl Chloride	0.01 ppm (26 μg/m3) 24-hour standard	
Land Development and Construction Projects		
	Construction Phase	**Operational Phase**
Greenhouse Gas Emission Thresholds		
GHG as CO2e	1,100 metric tons/year	Demonstrate consistency with the Climate Change Scoping Plan by implementing applicable Best Management Practices (BMP), or equivalent on-site or off-site mitigation. **All projects must implement Tier 1 BMPs (BMP 1 & 2):** BMP 1 - projects shall be designed and constructed without natural gas infrastructure. BMP 2 - projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready. **Projects that exceed 1,100 metric tons/year after implementation of Tier 1 BMPs must implement Tier 2 BMPs (BMP 3):** BMP 3 - residential projects shall achieve a 15% reduction in vehicle miles traveled per resident and office projects shall achieve a 15% reduction in vehicle miles traveled per worker compared to existing average vehicle miles traveled for the county, and retail projects shall achieve a no net increase in total vehicle miles traveled to show consistency with SB 743.

Stationary Source Only		
Toxic Air Contaminant (TAC) Thresholds		
Cancer Risk	An incremental increase in cancer risk greater than 10 in one million at any off-site receptor	
Non-cancer (Hazard Index)	Ground-level concentration of project-generated TACs that would result in a Hazard Index greater than 1 at any off-site receptor	
	Construction Phase	**Operational Phase**
Greenhouse Gas Emissions (GHG) Thresholds		
GHG as CO_2e	1,100 metric tons/year	10,000 metric tons/year

[a] *If all feasible BACT/BMPs are applied, then 80 pounds/day and 14.6 tons/year.*

[b] *If all feasible BACT/BMPs are applied, then 82 pounds/day and 15 tons/year.*

[a] *Source: SMAQMD. CEQA Guide, SMAQMD Thresholds of Significance Table. Available online at: https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf, accessed August 16, 2023.*

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

The SMAQMD currently recommends that impacts to sensitive receptors be considered significant when a project generates localized pollutant concentrations of NO_x, VOC, PM_{10}, or $PM_{2.5}$ at sensitive receptors near a project site that exceed the localized pollutant concentration thresholds listed above or when a project's traffic causes CO concentrations at sensitive receptors located near congested intersections to exceed the national or state ambient air quality standards. The roadway CO thresholds would also apply to the contribution of emissions associated with cumulative development. Additionally, the SMAQMD recommends impacts to sensitive receptors be considered significant if a project exceeds the TAC thresholds detailed in **Table 6** above.

Exposure to Objectionable Odors

A significant impact may occur if objectionable odors occur that would adversely impact sensitive receptors. Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills.

Methodology

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Project. Air pollutant emissions associated with the Project would result from Project operations and from Project-related traffic volumes. Construction activities would also generate air pollutant emissions at the Project Site and on roadways resulting from construction-related traffic. The net increase in Project Site emissions generated by these activities and other secondary sources have been

quantitatively estimated and compared to thresholds of significance recommended by the SMAQMD (see **Section 4.2**, **Project Impacts**, below).

Construction Emissions

The regional construction emissions associated with the Project were calculated using the California Emissions Estimator Model (CalEEMod 2022). CalEEMod was developed in collaboration with the air districts of California as a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.

Construction activities associated with demolition, site preparation, grading, and building construction would generate pollutant emissions. Specifically, these construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. These construction emissions were compared to the thresholds established by the SMAQMD.

Operational Emissions

Operational emissions associated with the Project were also calculated using CalEEMod 2022. Operational emissions associated with the Project would comprise mobile source emissions, energy demand, and other area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Area source emissions are generated by landscape maintenance equipment, application of architectural coatings, and consumer products. To determine if a regional air quality impact would occur, the increase in emissions is compared with the SMAQMD's recommended regional thresholds for operational emissions.

4.2 PROJECT IMPACTS

AQ Impact 1 **Would implementation of the Proposed Project conflict with or obstruct implementation of any applicable air quality plan? *(Less than Significant).***

The SMAQMD relies on its Guide to Air Quality Assessment in Sacramento County (CEQA Guide) to help achieve and maintain all air quality standards as relevant to land use projects.[15] Demonstration of the Project's conformity with all applicable thresholds of significance and best management practices described

[15] Sacramento Metropolitan Air Quality Management District, *Guide to Air Quality Assessment*, 2021. Available online at: https://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools, accessed August 16, 2023.

by SMAQMD's CEQA Guide indicates compliance with the regional attainment plans. The Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Plan) and the Triennial Report and Plan Revision are the current plan required by U.S. EPA and CARB and issued by SMAQMD to meet attainment. These plans demonstrate reasonable progress towards attainment as required by the SIP and CCAA. To demonstrate compliance of the Project with the plans there needs to be appropriate conformity analysis of land use assumptions and travel demand. The SMAQMD recommends comparing the project's VMT and population growth rate to the Sacramento Area Council of Government's (SACOG) growth projections included in the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

SACOG takes adopted local land use plans, such as the 2035 General Plan, into consideration when predicting future land use and growth projections in the MTP/SCS. If the project is consistent with the VMT and population growth projections in the City's General Plan, the Project would be consistent with the SACOG MTP/SCS. According to the MTP/SCS, the Project Site is located in an area that has 50 to 85% VMT of the regional average.[16] The Project is projected to have a maximum trip length of 11.7 miles, while the historic vehicle miles traveled per capita in the SACOG region is approximately 25.5 miles. The infill nature of the Project Site and its location within a predominantly residential area in proximity to amenities such as parks and transit/mobility options makes the Project consistent with the MTP/SCS. The Project's consistency with its land use designations and zoning also make it consistent with the MTP/SCS. The 2035 General Plan projects that by the year 2035, the City's population would have grown to 640,381 people. The current population of the City, according to the Department of Finance, is 518,037 people.[17] Based on the City's average household size of 2.59 persons, the Project could result in a maximum population increase of 280 persons.[18] Even while conservatively assuming all 280 residents are new to the City, the projected residents generated from the Project would not contribute to an exceedance of or be inconsistent with the City's projections for the year 2035. For these reasons, the Project is consistent with the VMT and population growth projections in the City's General Plan, and thus the Project would be consistent with the SACOG MTP/SCS as well as the Redesignation Substitution 1979 Ozone Standard and the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan.

In addition to the analysis of the Project compared to the MTP/SCS, the Project does not exceed regional significance thresholds for temporary construction activities and long-term project operation in the Basin,

---

16 Sacramento Area Council of Governments, *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*, 2019. Available at: https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy, accessed August 16, 2023.

17 California Department of Finance Demographic Research Unit, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark*, May 2022.

18 Impact Sciences, *CalEEMod Output for the Sacramento Mixed-Use Apartments Project*, August 2023.

shown in **Table 6, SMAQMD Regional Significance Thresholds**. The quantitative analysis of the Project against these thresholds is discussed under **AQ Impact 2.** The Project would not conflict with or obstruct implementation of any applicable air quality plan, and this impact is less than significant.

AQ Impact 2 **Would implementation of the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard? *(Less than Significant).***

A project may have a significant impact if project-related emissions would result in a cumulatively considerable net increase for any criteria pollutant for which the region in nonattainment under applicable federal or state ambient air quality standards. The cumulative analysis of air quality impacts follows the SMAQMD's guidance such that construction or operational project emissions will be considered cumulatively considerable if project-specific emissions exceed an applicable SMAQMD recommended daily threshold. The SMAQMD has established a zero-emissions threshold for PM10 and PM2.5, requiring that all construction projects implement SMAQMD's Basic Construction Emission Control Practices to control PM10 and PM2.5. With the implementation of SMAQMD's best management practices (BMPs), SMAQMD's maximum daily and annual thresholds increase to 80 pounds per day and 14.6 tons per year of PM10 and 82 pounds per day and 15 tons per year of PM2.5. The Project would implement the SMAQMD BMPs, which include:

- Controlling fugitive dust as required by District Rule 403 and enforced by District staff.
- Watering all exposed surfaces two times daily.
  - Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Covering or maintaining at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Using wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limiting vehicle speeds on unpaved roads to 15 miles per hour (mph).

- Requiring all roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.[19]

Regional Construction Significance Analysis

For purposes of this analysis, it is estimated that the Project would be constructed in approximately 15 months with construction beginning in early 2024 and project operations commencing in 2025. While construction may begin at a later date and/or take place over a longer period, these assumptions represent the earliest and fastest build-out potential resulting in a worst-case daily impact scenario for purposes of this analysis. This analysis assumes construction would be undertaken with the following primary construction phases: (1) Demolition, (2) Grading and Foundations and (3) Structural Building and Finishing. Demolition and removal of existing debris would occur for approximately one month. This phase would include the demolition of the two existing one-story vacant buildings (approximately 1,548 square feet of demolition). Grading and foundation preparation would occur for approximately 2 months and this analysis assumes cut/fill operations would balance soil on site and no soil import or export would be required. Building construction would occur for approximately 12 months and would include the construction of the proposed structure, connection of utilities, laying irrigation for landscaping, architectural coatings, paving and landscaping the Project Site.

The analysis of regional daily construction emissions has been prepared utilizing the CalEEMod computer model recommended by the SMAQMD. Predicted maximum daily construction-generated emissions for the Project are summarized in **Table 7, Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day.**

Table 7
Construction-Related Criteria Pollutant and Precursor Emissions – Maximum Pounds per Day

Construction Year	ROG	NOx	CO	SO_2	PM10	PM2.5
2024	1.69	15.9	17.0	0.02	3.61	2.04
2025	53.2	16.1	26.0	0.03	2.05	0.88
Regional Threshold	**--**	**85**	**--**	**--**	**80**	**82**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Impact Sciences August 2023. See Appendix A to this report.
Note: Project emissions account for the reductions from SMAQMD BMPs.

[19] Sacramento Metropolitan Air Quality Management District. 2019. Basic Construction Emission Control Practices. Available online at: 3 (airquality.org)

As shown in **Table 7**, the peak daily emissions generated during the construction of the Project would not exceed any of the regional emission thresholds recommended by the SMAQMD. As stated earlier, because the Project would implement SMAQMD's recommended BMPs, the thresholds applied against PM10 and PM2.5 are increased from a threshold of zero (0) to a threshold of 80 and 82 maximum pounds per day, respectively. Therefore, Project construction would not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Regional Operational Significance Analysis

Project-generated emissions would be associated with motor vehicle use, energy use, and area sources, such as the use of natural-gas-powered appliances, landscape maintenance equipment, consumer cleaning products, and architectural coatings associated with the operation of the Project. The operational emissions from the Project were calculated with CalEEMod and the operational emissions were compared against SMAQMD regional thresholds to determine Project significance. Long-term operational emissions attributable to the Project are summarized in **Table 8, Long-Term Operational Emissions – Maximum Pounds per Day**. As shown, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the SMAQMD.

Table 8
Long-Term Operational Emissions – Maximum Pounds per Day

Source	ROG	NOx	CO	SO_2	PM10	PM2.5
Mobile Source	8.05	8.85	72.8	0.15	12.8	3.33
Area Source	3.83	0.08	8.39	<0.01	0.01	0.01
Energy Use	0.04	0.62	0.37	<0.01	0.05	0.05
Total	*11.92*	*9.55*	*81.56*	*0.16*	*12.86*	*3.39*
Regional Threshold	**65**	**65**	**--**	**--**	**80**	**82**
Exceed?	*No*	*No*	*No*	*No*	*No*	*No*

Source: Impact Sciences, August 2023. See Appendix A to this report.

As shown in **Table 7** and **Table 8**, the Project's construction and operational emissions would not exceed the SMAQMD's thresholds for any criteria air pollutants. Therefore, regional construction and operational emissions would not result in a significant regional air quality impact. Thus, the Project would also not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. These impacts are less than significant.

Air Quality Health Impacts

On December 24, 2018, the California Supreme Court published its opinion on the *Sierra Club et al. v. County of Fresno et. Al.* (Case No. S219783) which determined that an environmental review must adequately analyze a project's potential impacts and inform the public how its bare numbers translate to a potential adverse health impacts or explain how existing scientific constraints cannot translate the emissions numbers to the potential health impacts.

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The national and state ambient air quality standards have been set at levels to protect human health with a determined margin of safety. As discussed previously, the Basin is in state non-attainment for PM2.5, PM10, and Ozone (O_3) and federal non-attainment for PM2.5 and O_3. Therefore, an increase in emissions of particulate matter or ozone precursors (ROG and NOx) has the potential to push the region further from reaching attainment status and, as a result, are the pollutants of greatest concern in the region. As noted in **Table 7** and **Table 8** above, the Project will emit criteria air pollutants during construction and operation**.** However, the Project will not exceed SMAQMD thresholds for ozone precursors (ROG and NOx), PM2.5, PM10, or any other criteria air pollutants, and will not result in a cumulatively significant impact for which the region is in non-attainment. Thus, with respect to the Project's increase in criteria pollutant emissions, the Project would not have the potential cause significant air quality health impacts. With respect to the Project's potential TAC and DPM impacts upon sensitive receptors, please refer to the discussion under **AQ Impact 3**.

AQ Impact 3 **Would implementation of the Proposed Project expose sensitive receptors to substantial air pollutant concentrations? (*Less than Significant).***

As previously discussed, some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.[20] The closest air quality sensitive receptors are single-family residences located 35 feet to the west and to the north of the Project Site, the Good Samaritan Church of God/the Hagginwood Academy for Children located 50 feet to

[20] California Air Resources Board, "Sensitive Receptor Assessment." Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment, accessed August 16, 2023.

the east of the Project Site, single-family residences located 135 feet from the southeast corner of the Project Site, and a single-family residence 125 feet from the southwest corner of the Project Site.

Construction of the Project would include demolition of the two existing buildings and parking spaces, site clearance and grading, placement of utilities, building construction, paving, application of architectural coatings, and interior finishing. Construction equipment and associated heavy-duty truck trips generate exhaust which contains diesel particulate matter (DPM), known as a toxic air contaminant (TAC). As demonstrated earlier, construction of the Project would not exceed significance thresholds for criteria pollutants and all construction would be temporary and localized.

The Project would not include the operations of any land uses routinely involving the use, storage, or processing of carcinogenic or non-carcinogenic toxic air contaminants. Thus, no appreciable operational-related toxic airborne emissions would result from Project implementation. With respect to construction, the construction activities associated with the Project would be typical of other similar land use development projects in the region and would be subject to the regulations and laws relating to toxic air pollutants at the regional, state, and federal level that would protect sensitive receptors from substantial concentrations of these emissions.

Operation of the Project would generate vehicle trips to and from the residences and retail uses. Since this is a largely residential project, most of the vehicle trips are expected to come from gasoline powered passenger cars. The site may attract some heavy-duty diesel trucks which emit DPM. However, due to the nature of the Project in developing a mixed-use facility that provides residential as well as retail uses, operations of the Project would reduce emissions spent on driving to these uses if they were separated. Therefore, impacts associated with the release of toxic air contaminants would be less than significant.

It has long been recognized that CO exceedances ("hot spots") are caused by vehicular emissions, primarily when idling at intersections. The Basin has been in attainment for CO for several years, and operations of the Project are not anticipated to generate substantial CO emissions. The SMAQMD developed a screening threshold in 2011, which states that any project involving an intersection with 31,600 vehicles per hour or more will require detailed analysis. According to City data, this roadway segment carries approximately 13,037 average daily trips where Marysville Boulevard intersects with Arcade Boulevard.[21] The Project is anticipated to generate a maximum of approximately 1,503 daily vehicle trips.[22] The intersection associated with the Project is well below the 31,600 vehicles an hour threshold. Furthermore, vehicle emissions standards have become increasingly more stringent in the last twenty years. With the turnover of older

21 City of Sacramento, "Traffic Counts," 1990. Available online at: https://www.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps/Traffic-Counts, accessed August 16, 2023.

22 Impact Sciences, *CalEEMod Output for the Sacramento Mixed-Use Apartments Project*, 2023.

vehicles, introduction of cleaner fuels and implementation of control technology on industrial facilities, CO concentrations for the Project vicinity have historically met state and federal attainment status for the air quality standards. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. Therefore, the Project would not have the potential to cause or contribute to an exceedance of the California one-hour or eight-hour CO standards of 20 or 9.0 ppm, respectively. Impacts with respect to localized CO concentrations would be less than significant.

Diesel Particulate Matter

Construction would result in the generation of DPM emissions from the use of off-road diesel equipment required for demolition, grading and excavation, building construction, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

In March 2015, the Office of Environmental Health Hazard Assessment (OEHHA) adopted revised guidelines that update previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF). The intent of the OEHHA 2015 guidance is to provide HRA procedures for use in the Air Toxics Hot Spots Program or for the permitting of existing, new, or modified stationary sources. As the Project is not part of the Air Toxics Hot Spots Program and is considered an urban infill retail/commercial development consisting primarily of mobile and area sources (i.e., non-stationary sources), the OEHHA 2015 guidance is not directly applicable.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current methodology for conducting health risk assessments is associated with long term exposure periods (9, 30, and 70 years). Therefore, short-term construction activities would not be expected to generate a significant health risk. Furthermore, the Project Site is approximately 1.51 acres. Generally, construction for projects contained in a site of such size represent less than significant health risks due to limitations of the off-road diesel equipment able to operate. When compared to larger sites, smaller sites such as the Project would generally result in reduced DPM emissions, reduced dust-generating ground-disturbance, and reduced duration of construction activities. Furthermore, construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five (5) minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM

emissions.[23] For these reasons, DPM generated by construction activities would not be expected to expose sensitive receptors to substantial amounts of air toxics and these impacts would be less than significant.

AQ Impact 4 **Would the Proposed Project include sources that could create other emissions (such as those leading to odors) adversely affecting a substantial number of people? (*Less than Significant).***

The SMAQMD CEQA Guide identifies certain land uses as sources of odors. These land uses include wastewater treatment plants, sanitary landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants.[24] The Project would not include any of the land uses that have been identified by the SMAQMD as odor sources.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon Project completion. In addition, the Project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would reduce the detectable odors from heavy-duty equipment exhaust. The Project would also be required to comply with the SMAQMD Rule 402 (Nuisance) and Rule 442 (Architectural Coatings). As such, the Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant.

---

23 California Air Resources Board, *Frequently Asked Questions Regulation for In-Use Off-Road Diesel-Fueled (Off-Road Regulation)*, 2015. Available online at: https://ww3.arb.ca.gov/msprog/ordiesel/faq/idlepolicyfaq.pdf, accessed August 16, 2023.

24 SMAQMD, *CEQA Guidance & Tools - Chapter 7: Odors*, 2016. Available online at: https://www.airquality.org/LandUseTransportation/Documents/Ch7Odors%20FINAL6-2016.pdf, accessed August 16, 2023.

5.0 REFERENCES

California Air Pollution Control Officers Association (CAPCOA), "Health Effects." Available online at: http://www.capcoa.org/health-effects/, accessed August 16, 2023.

California Air Resources Board. "CARB Identified Toxic Air Contaminants." Available online at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, accessed August 16, 2023.

California Air Resources Board. "Air Quality Data Statistics." Available online at: https://www.arb.ca.gov/adam/select8/sc8start.php, accessed August 2023.

California Air Resources Board. *Ambient Air Quality Standards*. May 2016. Available online at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed August 16, 2023.

California Air Resources Board. "Sensitive Receptor Assessment." Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment, accessed August 16, 2023.

California Air Resources Board. *Maps of State and Federal Area Designations*. 2022. Available online at: https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations, accessed August 16, 2023.

California Department of Finance Demographic Research Unit. *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022, with 2020 Benchmark*. May 2022.

City of Sacramento. "Traffic Counts." 1990. Available at: https://www.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps/Traffic-Counts, accessed August 16, 2023.

City of Sacramento. *Sacramento 2035 General Plan Background Report*. 2014. Accessed online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/Apdx-C_SacGP_BR_Reduced.pdf?la=en, accessed August 16, 2023.

City of Sacramento. *City of Sacramento 2035 General Plan,* Air Quality and Climate Change, Environmental Resources. 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Environmental-Resources.pdf?la=en, accessed August 16, 2023.

City of Sacramento. *North Sacramento Community Plan*. 2015. Available at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/North-Sacramento.pdf?la=en, accessed August 16, 2023.

Impact Sciences. *CalEEMod Output for the Sacramento Mixed-Use Apartments Project*. August 2023.

Office of Environmental Health Hazard Assessment and The American Lung Association of California. *Air Pollution and Children's Health – A Fact Sheet by OEHHA and the American Lung Association*.

2003. Available online at: https://oehha.ca.gov/air/air-pollution-and-childrens-health-fact-sheet-oehha-and-american-lung-association, accessed August 2023.

Sacramento Metropolitan Air Quality Management District. *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions)*. September 26, 2013. Available: https://www.airquality.org/ProgramCoordination/Documents/4)%202013%20SIP%20Revision%20Report%201997%20Std.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *Triennial Report and Air Quality Plan Revision*. May 28, 2015. Available online at: https://www.airquality.org/ProgramCoordination/Documents/11)%20%202015TriennialReportandProgressRevision.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District, *PM10 Implementation/Maintenance Plan and Redesignation Request for Sacramento County*. October 28, 2010. Available online at: https://www.airquality.org/ProgramCoordination/Documents/10)%20%20PM10%20Imp%20and%20MP%202010.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *PM2.5 Implementation/Maintenance Plan and Redesignation Request for Sacramento PM2.5 Nonattainment Area*. October 24, 2013. Available online at: https://www.airquality.org/ProgramCoordination/Documents/PM2.5%20Imp%20and%20Redesignation%202013.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *2004 Revision to the California State Implementation Plan for Carbon Monoxide*. July 22, 2004. Available online at: https://www.airquality.org/ProgramCoordination/Documents/1)%202004%20CO%20Maintenance%20Plan.pdf, accessed August 16, 2023.

Sacramento Area Council of Governments. *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*. 2019. Available online at: https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *CEQA Guidance & Tools*, Chapter 7: Odors. 2016. Available at: https://www.airquality.org/LandUseTransportation/Documents/Ch7Odors%20FINAL6-2016.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *Basic Construction Emission Control Practices.* 2019. Available online at: https://www.airquality.org/LandUseTransportation/Documents/Ch3BasicEmissionControlPracticesBMPSFinal7-2019.pdf, accessed August 16, 2023.

Sacramento Metropolitan Air Quality Management District. *Guide to Air Quality Assessment*. 2021. Available online at: https://www.airquality.org/Residents/CEQA-Land-Use-Planning/CEQA-Guidance-Tools, accessed August 16, 2023.

APPENDIX A

Air Quality Data

Sacramento Mixed-Use Apartments Project v2 Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Sacramento Mixed-Use Apartments Project v2
Construction Start Date	1/8/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	35.4
Location	38.626519, -121.433226
County	Sacramento
City	Sacramento
Air District	Sacramento Metropolitan AQMD
Air Basin	Sacramento Valley
TAZ	522
EDFZ	13
Electric Utility	Sacramento Municipal Utility District
Gas Utility	Pacific Gas & Electric
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	108	Dwelling Unit	1.30	113,438	0.00	—	302	—
High Turnover (Sit Down Restaurant)	7.95	1000sqft	0.20	7,951	3,417	—	—	—
Enclosed Parking with Elevator	111	Space	0.01	44,400	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-13	Install Electric Ranges in Place of Gas Ranges
Energy	E-15	Require All-Electric Development

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.	2.70	53.2	15.9	26.0	0.03	0.74	2.86	3.61	0.68	1.36	2.04	—	5,009	5,009	0.18	0.16	7.28	5,070
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.64	53.1	16.1	23.9	0.03	0.74	2.86	3.61	0.68	1.36	2.04	—	4,841	4,841	0.19	0.16	0.19	4,894
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.34	3.39	8.61	11.0	0.02	0.33	0.96	1.28	0.30	0.31	0.61	—	2,271	2,271	0.09	0.08	1.45	2,298
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.24	0.62	1.57	2.00	< 0.005	0.06	0.17	0.23	0.06	0.06	0.11	—	376	376	0.02	0.01	0.24	381

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.01	1.69	15.9	17.0	0.02	0.74	2.86	3.61	0.68	1.36	2.04	—	3,550	3,550	0.16	0.14	6.24	3,602
2025	2.70	53.2	15.9	26.0	0.03	0.57	1.49	2.05	0.52	0.35	0.88	—	5,009	5,009	0.18	0.16	7.28	5,070
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.01	1.69	15.9	16.7	0.02	0.74	2.86	3.61	0.68	1.36	2.04	—	3,420	3,420	0.14	0.14	0.16	3,465
2025	2.64	53.1	16.1	23.9	0.03	0.57	1.49	2.05	0.52	0.35	0.88	—	4,841	4,841	0.19	0.16	0.19	4,894
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.34	1.11	8.61	11.0	0.02	0.33	0.96	1.28	0.30	0.31	0.61	—	2,271	2,271	0.09	0.08	1.45	2,298
2025	0.39	3.39	2.31	3.39	0.01	0.08	0.23	0.31	0.07	0.06	0.13	—	736	736	0.03	0.03	0.52	746
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.24	0.20	1.57	2.00	< 0.005	0.06	0.17	0.23	0.06	0.06	0.11	—	376	376	0.02	0.01	0.24	381
2025	0.07	0.62	0.42	0.62	< 0.005	0.01	0.04	0.06	0.01	0.01	0.02	—	122	122	< 0.005	< 0.005	0.09	123

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	2.01	1.69	15.9	17.0	0.02	0.74	2.86	3.61	0.68	1.36	2.04	—	3,550	3,550	0.16	0.14	6.24	3,602
2025	2.70	53.2	15.9	26.0	0.03	0.57	1.49	2.05	0.52	0.35	0.88	—	5,009	5,009	0.18	0.16	7.28	5,070
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.01	1.69	15.9	16.7	0.02	0.74	2.86	3.61	0.68	1.36	2.04	—	3,420	3,420	0.14	0.14	0.16	3,465
2025	2.64	53.1	16.1	23.9	0.03	0.57	1.49	2.05	0.52	0.35	0.88	—	4,841	4,841	0.19	0.16	0.19	4,894
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.34	1.11	8.61	11.0	0.02	0.33	0.96	1.28	0.30	0.31	0.61	—	2,271	2,271	0.09	0.08	1.45	2,298
2025	0.39	3.39	2.31	3.39	0.01	0.08	0.23	0.31	0.07	0.06	0.13	—	736	736	0.03	0.03	0.52	746
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.24	0.20	1.57	2.00	< 0.005	0.06	0.17	0.23	0.06	0.06	0.11	—	376	376	0.02	0.01	0.24	381
2025	0.07	0.62	0.42	0.62	< 0.005	0.01	0.04	0.06	0.01	0.01	0.02	—	122	122	< 0.005	< 0.005	0.09	123

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.	9.76	11.9	7.60	81.2	0.16	0.12	12.7	12.8	0.12	3.22	3.34	107	16,876	16,983	10.2	0.68	72.5	17,512
Mit.	9.76	11.9	7.60	81.2	0.16	0.12	12.7	12.8	0.12	3.22	3.34	107	16,878	16,985	10.2	0.68	72.5	17,514
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.94	10.1	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	107	15,483	15,591	10.2	0.74	14.8	16,083
Mit.	7.94	10.1	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	107	15,486	15,593	10.2	0.74	14.8	16,085

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.04	9.39	5.84	48.3	0.10	0.08	8.33	8.41	0.08	2.12	2.19	107	10,800	10,908	10.0	0.51	30.0	11,339
Mit.	7.04	9.39	5.84	48.3	0.10	0.08	8.33	8.41	0.08	2.12	2.19	107	10,802	10,910	10.0	0.51	30.0	11,341
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	—	—	—	> -0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.29	1.71	1.07	8.81	0.02	0.02	1.52	1.53	0.01	0.39	0.40	17.8	1,788	1,806	1.66	0.08	4.97	1,877
Mit.	1.29	1.71	1.07	8.81	0.02	0.02	1.52	1.53	0.01	0.39	0.40	17.8	1,788	1,806	1.66	0.08	4.97	1,878
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	> -0.5%	> -0.5%	> -0.5%	> -0.5%	—	> -0.5%

2.5. Operations Emissions by Sector, Unmitigated

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	8.77	8.05	7.52	72.8	0.15	0.12	12.7	12.8	0.11	3.22	3.33	—	15,796	15,796	0.68	0.64	59.3	16,065
Area	0.99	3.83	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	25.7	25.7	< 0.005	< 0.005	—	25.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,036	1,036	0.04	< 0.005	—	1,039
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	9.76	11.9	7.60	81.2	0.16	0.12	12.7	12.8	0.12	3.22	3.34	107	16,876	16,983	10.2	0.68	72.5	17,512

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.94	7.19	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	—	14,430	14,430	0.77	0.71	1.54	14,662
Area	0.00	2.90	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,036	1,036	0.04	< 0.005	—	1,039
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	7.94	10.1	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	107	15,483	15,591	10.2	0.74	14.8	16,083
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.37	5.86	5.78	42.5	0.10	0.08	8.33	8.41	0.07	2.12	2.19	—	9,729	9,729	0.54	0.47	16.8	9,900
Area	0.68	3.54	0.05	5.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	17.6	17.6	< 0.005	< 0.005	—	17.7
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,036	1,036	0.04	< 0.005	—	1,039
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	7.04	9.39	5.84	48.3	0.10	0.08	8.33	8.41	0.08	2.12	2.19	107	10,800	10,908	10.0	0.51	30.0	11,339
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.07	1.06	7.76	0.02	0.01	1.52	1.53	0.01	0.39	0.40	—	1,611	1,611	0.09	0.08	2.78	1,639
Area	0.12	0.65	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.92	2.92	< 0.005	< 0.005	—	2.93
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	172	172	0.01	< 0.005	—	172
Water	—	—	—	—	—	—	—	—	—	—	—	2.20	2.87	5.07	0.01	< 0.005	—	6.70
Waste	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.19	2.19
Total	1.29	1.71	1.07	8.81	0.02	0.02	1.52	1.53	0.01	0.39	0.40	17.8	1,788	1,806	1.66	0.08	4.97	1,877

2.6. Operations Emissions by Sector, Mitigated

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	8.77	8.05	7.52	72.8	0.15	0.12	12.7	12.8	0.11	3.22	3.33	—	15,796	15,796	0.68	0.64	59.3	16,065
Area	0.99	3.83	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	25.7	25.7	< 0.005	< 0.005	—	25.8
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,038	1,038	0.04	< 0.005	—	1,041
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	9.76	11.9	7.60	81.2	0.16	0.12	12.7	12.8	0.12	3.22	3.34	107	16,878	16,985	10.2	0.68	72.5	17,514
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.94	7.19	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	—	14,430	14,430	0.77	0.71	1.54	14,662
Area	0.00	2.90	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	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,038	1,038	0.04	< 0.005	—	1,041
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	7.94	10.1	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	107	15,486	15,593	10.2	0.74	14.8	16,085
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.37	5.86	5.78	42.5	0.10	0.08	8.33	8.41	0.07	2.12	2.19	—	9,729	9,729	0.54	0.47	16.8	9,900
Area	0.68	3.54	0.05	5.75	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	17.6	17.6	< 0.005	< 0.005	—	17.7
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,038	1,038	0.04	< 0.005	—	1,041
Water	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5

Waste	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Total	7.04	9.39	5.84	48.3	0.10	0.08	8.33	8.41	0.08	2.12	2.19	107	10,802	10,910	10.0	0.51	30.0	11,341
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.16	1.07	1.06	7.76	0.02	0.01	1.52	1.53	0.01	0.39	0.40	—	1,611	1,611	0.09	0.08	2.78	1,639
Area	0.12	0.65	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.92	2.92	< 0.005	< 0.005	—	2.93
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	172	172	0.01	< 0.005	—	172
Water	—	—	—	—	—	—	—	—	—	—	—	2.20	2.87	5.07	0.01	< 0.005	—	6.70
Waste	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.19	2.19
Total	1.29	1.71	1.07	8.81	0.02	0.02	1.52	1.53	0.01	0.39	0.40	17.8	1,788	1,806	1.66	0.08	4.97	1,878

3. Construction Emissions Details

3.1. Demolition (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.90	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	143	143	0.01	< 0.005	—	144
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.8
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	< 0.005	0.01	0.02	130
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
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.9	64.9	0.01	0.01	< 0.005	68.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.59	7.59	< 0.005	< 0.005	0.01	7.69
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
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.73	3.73	< 0.005	< 0.005	< 0.005	3.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.27

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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.65

3.2. Demolition (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.92	1.61	15.6	16.0	0.02	0.67	—	0.67	0.62	—	0.62	—	2,494	2,494	0.10	0.02	—	2,502
Demolition	—	—	—	—	—	—	0.05	0.05	—	0.01	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.90	0.92	< 0.005	0.04	—	0.04	0.04	—	0.04	—	143	143	0.01	< 0.005	—	144
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.8	23.8	< 0.005	< 0.005	—	23.8
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.60	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	< 0.005	0.01	0.02	130
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
Hauling	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	64.9	64.9	0.01	0.01	< 0.005	68.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.59	7.59	< 0.005	< 0.005	0.01	7.69
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
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.73	3.73	< 0.005	< 0.005	< 0.005	3.92
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.26	1.26	< 0.005	< 0.005	< 0.005	1.27
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
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.62	0.62	< 0.005	< 0.005	< 0.005	0.65

3.3. Grading (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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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	0.24	0.20	1.96	1.90	< 0.005	0.09	—	0.09	0.08	—	0.08	—	303	303	0.01	< 0.005	—	304
Dust From Material Movement	—	—	—	—	—	—	0.34	0.34	—	0.16	0.16	—	—	—	—	—	—	—
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	0.36	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	50.1	50.1	< 0.005	< 0.005	—	50.3
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	116	116	< 0.005	< 0.005	0.47	118
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
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	103	103	< 0.005	< 0.005	0.01	104
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
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.03	13.2
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.15	2.15	< 0.005	< 0.005	< 0.005	2.18
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
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	0.00

3.4. Grading (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	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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	1.96	1.65	15.9	15.4	0.02	0.74	—	0.74	0.68	—	0.68	—	2,454	2,454	0.10	0.02	—	2,462
Dust From Material Movement	—	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
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	0.24	0.20	1.96	1.90	< 0.005	0.09	—	0.09	0.08	—	0.08	—	303	303	0.01	< 0.005	—	304
Dust From Material Movement	—	—	—	—	—	—	0.34	0.34	—	0.16	0.16	—	—	—	—	—	—	—
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	0.36	0.35	< 0.005	0.02	—	0.02	0.02	—	0.02	—	50.1	50.1	< 0.005	< 0.005	—	50.3

Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.03	0.65	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	116	116	< 0.005	< 0.005	0.47	118
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
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.48	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	103	103	< 0.005	< 0.005	0.01	104
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
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.0	13.0	< 0.005	< 0.005	0.03	13.2
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.15	2.15	< 0.005	< 0.005	< 0.005	2.18
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
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	0.00

3.5. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.36	1.13	9.44	10.1	0.02	0.37	—	0.37	0.34	—	0.34	—	1,801	1,801	0.07	0.01	—	1,807
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	1.36	1.13	9.44	10.1	0.02	0.37	—	0.37	0.34	—	0.34	—	1,801	1,801	0.07	0.01	—	1,807
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	0.71	0.59	4.93	5.28	0.01	0.19	—	0.19	0.18	—	0.18	—	941	941	0.04	0.01	—	944
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	0.13	0.11	0.90	0.96	< 0.005	0.04	—	0.04	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
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	0.48	0.44	0.33	6.47	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,155	1,155	0.05	0.04	4.72	1,173

Vendor	0.07	0.03	1.13	0.41	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	594	594	0.04	0.09	1.52	622
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	4.76	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,025	1,025	0.03	0.04	0.12	1,038
Vendor	0.07	0.02	1.21	0.42	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	593	593	0.04	0.09	0.04	620
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.19	2.54	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	550	550	0.01	0.02	1.07	557
Vendor	0.04	0.01	0.62	0.21	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	310	310	0.02	0.04	0.34	324
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.0	91.0	< 0.005	< 0.005	0.18	92.3
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	51.3	51.3	< 0.005	0.01	0.06	53.7
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	0.00

3.6. 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	1.36	1.13	9.44	10.1	0.02	0.37	—	0.37	0.34	—	0.34	—	1,801	1,801	0.07	0.01	—	1,807
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	1.36	1.13	9.44	10.1	0.02	0.37	—	0.37	0.34	—	0.34	—	1,801	1,801	0.07	0.01	—	1,807
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	0.71	0.59	4.93	5.28	0.01	0.19	—	0.19	0.18	—	0.18	—	941	941	0.04	0.01	—	944
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	0.13	0.11	0.90	0.96	< 0.005	0.04	—	0.04	0.03	—	0.03	—	156	156	0.01	< 0.005	—	156
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	0.48	0.44	0.33	6.47	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,155	1,155	0.05	0.04	4.72	1,173
Vendor	0.07	0.03	1.13	0.41	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	594	594	0.04	0.09	1.52	622
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.44	0.39	0.44	4.76	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,025	1,025	0.03	0.04	0.12	1,038
Vendor	0.07	0.02	1.21	0.42	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	593	593	0.04	0.09	0.04	620
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.23	0.21	0.19	2.54	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	550	550	0.01	0.02	1.07	557
Vendor	0.04	0.01	0.62	0.21	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	310	310	0.02	0.04	0.34	324
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.03	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.0	91.0	< 0.005	< 0.005	0.18	92.3
Vendor	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	51.3	51.3	< 0.005	0.01	0.06	53.7
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	0.00

3.7. Building Construction (2025) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	0.24	0.20	1.70	1.90	< 0.005	0.06	—	0.06	0.06	—	0.06	—	342	342	0.01	< 0.005	—	343

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	0.31	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.6	56.6	< 0.005	< 0.005	—	56.8
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	0.46	0.42	0.29	6.01	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,132	1,132	0.02	0.04	4.35	1,149
Vendor	0.06	0.03	1.05	0.39	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	582	582	0.04	0.09	1.51	610
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.37	4.43	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,005	1,005	0.02	0.04	0.11	1,018
Vendor	0.06	0.02	1.13	0.40	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	582	582	0.04	0.09	0.04	608
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.86	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	196	196	< 0.005	0.01	0.36	199
Vendor	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	0.01	0.02	0.12	116
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	0.06	32.9
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02	19.1
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	0.00

3.8. Building Construction (2025) - 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	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	1.28	1.07	8.95	10.0	0.02	0.33	—	0.33	0.30	—	0.30	—	1,801	1,801	0.07	0.01	—	1,807
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	0.24	0.20	1.70	1.90	< 0.005	0.06	—	0.06	0.06	—	0.06	—	342	342	0.01	< 0.005	—	343
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	0.31	0.35	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.6	56.6	< 0.005	< 0.005	—	56.8
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	0.46	0.42	0.29	6.01	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,132	1,132	0.02	0.04	4.35	1,149
Vendor	0.06	0.03	1.05	0.39	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	582	582	0.04	0.09	1.51	610
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.42	0.38	0.37	4.43	0.00	0.00	1.01	1.01	0.00	0.24	0.24	—	1,005	1,005	0.02	0.04	0.11	1,018
Vendor	0.06	0.02	1.13	0.40	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	582	582	0.04	0.09	0.04	608
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.86	0.00	0.00	0.19	0.19	0.00	0.04	0.04	—	196	196	< 0.005	0.01	0.36	199
Vendor	0.01	< 0.005	0.21	0.07	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	110	110	0.01	0.02	0.12	116
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	32.4	32.4	< 0.005	< 0.005	0.06	32.9
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.3	18.3	< 0.005	< 0.005	0.02	19.1
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	0.00

3.9. Paving (2025) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.59	0.49	4.63	6.50	0.01	0.20	—	0.20	0.19	—	0.19	—	992	992	0.04	0.01	—	995
Paving	—	< 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	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.63	6.50	0.01	0.20	—	0.20	0.19	—	0.19	—	992	992	0.04	0.01	—	995
Paving	—	< 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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.8	59.8	< 0.005	< 0.005	—	60.0
Paving	—	< 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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.90	9.90	< 0.005	< 0.005	—	9.93
Paving	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.75	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	< 0.005	0.01	0.54	144
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

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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	0.01	0.01	128
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
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.79	7.79	< 0.005	< 0.005	0.01	7.90
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.31
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
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	0.00

3.10. Paving (2025) - 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	0.59	0.49	4.63	6.50	0.01	0.20	—	0.20	0.19	—	0.19	—	992	992	0.04	0.01	—	995
Paving	—	< 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	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	0.49	4.63	6.50	0.01	0.20	—	0.20	0.19	—	0.19	—	992	992	0.04	0.01	—	995
Paving	—	< 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	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.28	0.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	59.8	59.8	< 0.005	< 0.005	—	60.0
Paving	—	< 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	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.90	9.90	< 0.005	< 0.005	—	9.93
Paving	—	< 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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.04	0.75	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	142	142	< 0.005	0.01	0.54	144
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
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.05	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	126	126	< 0.005	0.01	0.01	128

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
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.79	7.79	< 0.005	< 0.005	0.01	7.90
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.29	1.29	< 0.005	< 0.005	< 0.005	1.31
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
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	0.00

3.11. Architectural Coating (2025) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134

Architect Coatings	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	3.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.09	0.08	0.06	1.20	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	226	226	< 0.005	0.01	0.87	230
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
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	0.89	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	201	201	< 0.005	0.01	0.02	204
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

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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.09
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
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	0.00

3.12. Architectural Coating (2025) - 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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134

Architectural	—	50.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	0.05	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.05	8.05	< 0.005	< 0.005	—	8.08
Architectural Coatings	—	3.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.34
Architectural Coatings	—	0.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.09	0.08	0.06	1.20	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	226	226	< 0.005	0.01	0.87	230
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
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	0.89	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	201	201	< 0.005	0.01	0.02	204
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

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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
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
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.06	2.06	< 0.005	< 0.005	< 0.005	2.09
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
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	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.07	2.81	2.75	26.8	0.06	0.04	4.72	4.77	0.04	1.20	1.24	—	5,872	5,872	0.24	0.24	22.1	5,971
High Turnover (Sit Down Restaurant)	5.70	5.25	4.77	46.1	0.10	0.07	7.96	8.03	0.07	2.02	2.09	—	9,924	9,924	0.43	0.41	37.2	10,094

Enclosed Parking with Elevator	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	8.77	8.05	7.52	72.8	0.15	0.12	12.7	12.8	0.11	3.22	3.33	—	15,796	15,796	0.68	0.64	59.3	16,065
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.79	2.51	3.24	22.4	0.05	0.04	4.72	4.77	0.04	1.20	1.24	—	5,363	5,363	0.27	0.26	0.57	5,448
High Turnover (Sit Down Restaurant)	5.15	4.67	5.61	39.0	0.09	0.07	7.96	8.03	0.07	2.02	2.09	—	9,067	9,067	0.49	0.45	0.96	9,214
Enclosed Parking with Elevator	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	7.94	7.19	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	—	14,430	14,430	0.77	0.71	1.54	14,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.48	0.44	0.53	3.84	0.01	0.01	0.82	0.83	0.01	0.21	0.22	—	861	861	0.04	0.04	1.50	875
High Turnover (Sit Down Restaurant)	0.68	0.63	0.53	3.93	0.01	0.01	0.70	0.71	0.01	0.18	0.18	—	750	750	0.05	0.04	1.28	764
Enclosed Parking with Elevator	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	1.16	1.07	1.06	7.76	0.02	0.01	1.52	1.53	0.01	0.39	0.40	—	1,611	1,611	0.09	0.08	2.78	1,639

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	3.07	2.81	2.75	26.8	0.06	0.04	4.72	4.77	0.04	1.20	1.24	—	5,872	5,872	0.24	0.24	22.1	5,971
High Turnover (Sit Down Restaurant)	5.70	5.25	4.77	46.1	0.10	0.07	7.96	8.03	0.07	2.02	2.09	—	9,924	9,924	0.43	0.41	37.2	10,094
Enclosed Parking with Elevator	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	8.77	8.05	7.52	72.8	0.15	0.12	12.7	12.8	0.11	3.22	3.33	—	15,796	15,796	0.68	0.64	59.3	16,065
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.79	2.51	3.24	22.4	0.05	0.04	4.72	4.77	0.04	1.20	1.24	—	5,363	5,363	0.27	0.26	0.57	5,448
High Turnover (Sit Down Restaurant)	5.15	4.67	5.61	39.0	0.09	0.07	7.96	8.03	0.07	2.02	2.09	—	9,067	9,067	0.49	0.45	0.96	9,214
Enclosed Parking with Elevator	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	7.94	7.19	8.85	61.4	0.14	0.12	12.7	12.8	0.11	3.22	3.33	—	14,430	14,430	0.77	0.71	1.54	14,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	0.48	0.44	0.53	3.84	0.01	0.01	0.82	0.83	0.01	0.21	0.22	—	861	861	0.04	0.04	1.50	875
High Turnover (Sit Down Restaurant)	0.68	0.63	0.53	3.93	0.01	0.01	0.70	0.71	0.01	0.18	0.18	—	750	750	0.05	0.04	1.28	764
Enclosed Parking with Elevator	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	1.16	1.07	1.06	7.76	0.02	0.01	1.52	1.53	0.01	0.39	0.40	—	1,611	1,611	0.09	0.08	2.78	1,639

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	549	549	0.02	< 0.005	—	550
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	319	319	0.01	< 0.005	—	320
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.01	< 0.005	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,036	1,036	0.04	< 0.005	—	1,039

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	549	549	0.02	< 0.005	—	550
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	319	319	0.01	< 0.005	—	320
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.01	< 0.005	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,036	1,036	0.04	< 0.005	—	1,039
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	90.9	90.9	< 0.005	< 0.005	—	91.1
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	52.8	52.8	< 0.005	< 0.005	—	52.9
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	27.9	27.9	< 0.005	< 0.005	—	27.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.01	< 0.005	—	172

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	551	551	0.02	< 0.005	—	552
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	319	319	0.01	< 0.005	—	320
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.01	< 0.005	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,038	1,038	0.04	< 0.005	—	1,041
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	551	551	0.02	< 0.005	—	552
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	319	319	0.01	< 0.005	—	320
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	168	168	0.01	< 0.005	—	169
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,038	1,038	0.04	< 0.005	—	1,041
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	91.3	91.3	< 0.005	< 0.005	—	91.5

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	52.8	52.8	< 0.005	< 0.005	—	52.9
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	27.9	27.9	< 0.005	< 0.005	—	27.9
Total	—	—	—	—	—	—	—	—	—	—	—	—	172	172	0.01	< 0.005	—	172

4.2.3. Natural Gas 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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

High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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

4.2.4. Natural Gas 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
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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

High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
High Turnover (Sit Down Restaurant)	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
Enclosed Parking with Elevator	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	0.00	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

4.3. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	2.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.99	0.92	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Total	0.99	3.83	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	25.7	25.7	< 0.005	< 0.005	—	25.8
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	0.00	—	0.00
Consumer Products	—	2.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	2.90	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.12	0.12	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.92	2.92	< 0.005	< 0.005	—	2.93
Total	0.12	0.65	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.92	2.92	< 0.005	< 0.005	—	2.93

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	—	2.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.99	0.92	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	—	25.7	25.7	< 0.005	< 0.005	—	25.8
Total	0.99	3.83	0.08	8.39	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	25.7	25.7	< 0.005	< 0.005	—	25.8

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	0.00	—	0.00
Consumer Products	—	2.60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	2.90	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	0.47	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.12	0.12	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.92	2.92	< 0.005	< 0.005	—	2.93
Total	0.12	0.65	0.01	1.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	2.92	2.92	< 0.005	< 0.005	—	2.93

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.14	10.6	18.7	0.03	0.02	—	24.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.16	6.78	11.9	0.02	0.01	—	15.8
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.14	10.6	18.7	0.03	0.02	—	24.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.16	6.78	11.9	0.02	0.01	—	15.8
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.35	1.75	3.10	< 0.005	< 0.005	—	4.09

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.85	1.12	1.98	< 0.005	< 0.005	—	2.61
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.20	2.87	5.07	0.01	< 0.005	—	6.70

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	—	—	—	—	—	—	—	—	—	—	—	8.14	10.6	18.7	0.03	0.02	—	24.7
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.16	6.78	11.9	0.02	0.01	—	15.8
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	8.14	10.6	18.7	0.03	0.02	—	24.7

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	5.16	6.78	11.9	0.02	0.01	—	15.8
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	13.3	17.4	30.7	0.05	0.03	—	40.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.35	1.75	3.10	< 0.005	< 0.005	—	4.09
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	0.85	1.12	1.98	< 0.005	< 0.005	—	2.61
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.20	2.87	5.07	0.01	< 0.005	—	6.70

4.5. Waste Emissions by Land Use

4.5.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	150

High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	51.0	0.00	51.0	5.10	0.00	—	178
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	51.0	0.00	51.0	5.10	0.00	—	178
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7.12	0.00	7.12	0.71	0.00	—	24.9
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.44	0.00	8.44	0.84	0.00	—	29.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.4

4.5.1. 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	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	51.0	0.00	51.0	5.10	0.00	—	178
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	43.0	0.00	43.0	4.30	0.00	—	150
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	51.0	0.00	51.0	5.10	0.00	—	178
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	94.0	0.00	94.0	9.39	0.00	—	329
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	7.12	0.00	7.12	0.71	0.00	—	24.9
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	8.44	0.00	8.44	0.84	0.00	—	29.5
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	15.6	0.00	15.6	1.56	0.00	—	54.4

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.06	2.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.19	2.19

4.6.2. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.81	0.81
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	12.4
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13.2	13.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13	0.13
High Turnover (Sit Down Restaurant)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.06	2.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.19	2.19

4.7. Offroad Emissions By Equipment Type

4.7.1. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	1/8/2024	2/5/2024	5.00	21.0	—
Grading	Grading	2/6/2024	4/8/2024	5.00	45.0	—
Building Construction	Building Construction	4/9/2024	4/7/2025	5.00	260	—
Paving	Paving	3/7/2025	4/7/2025	5.00	22.0	—
Architectural Coating	Architectural Coating	3/7/2025	4/7/2025	5.00	22.0	—

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	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
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	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	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	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
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	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
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	2.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	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	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Architectural Coating	Air Compressors	Diesel	Average	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	12.5	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT
Demolition	Hauling	0.86	20.0	HHDT

Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	99.7	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	20.1	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	19.9	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	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	12.5	14.3	LDA,LDT1,LDT2
Demolition	Vendor	—	8.80	HHDT,MHDT

Demolition	Hauling	0.86	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	10.0	14.3	LDA,LDT1,LDT2
Grading	Vendor	—	8.80	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	99.7	14.3	LDA,LDT1,LDT2
Building Construction	Vendor	20.1	8.80	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	12.5	14.3	LDA,LDT1,LDT2
Paving	Vendor	—	8.80	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	19.9	14.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.80	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

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	229,712	76,571	11,946	3,978	26.1

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	1,548	—
Grading	—	—	45.0	0.00	—
Paving	0.00	0.00	0.00	0.00	0.01

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
High Turnover (Sit Down Restaurant)	0.00	0%
Enclosed Parking with Elevator	0.01	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	375	0.01	< 0.005
2025	0.00	375	0.01	< 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	588	530	442	203,858	6,656	6,007	5,004	2,309,410
High Turnover (Sit Down Restaurant)	892	973	1,134	342,425	3,402	9,626	11,218	1,973,911
Enclosed Parking with Elevator	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	588	530	442	203,858	6,656	6,007	5,004	2,309,410
High Turnover (Sit Down Restaurant)	892	973	1,134	342,425	3,402	9,626	11,218	1,973,911
Enclosed Parking with Elevator	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	108
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	108
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)

229711.94999999998	76,571	11,946	3,978	26.1

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	534,645	375	0.0129	0.0017	0.00
High Turnover (Sit Down Restaurant)	310,578	375	0.0129	0.0017	0.00
Enclosed Parking with Elevator	163,900	375	0.0129	0.0017	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	536,709	375	0.0129	0.0017	0.00

High Turnover (Sit Down Restaurant)	310,578	375	0.0129	0.0017	0.00
Enclosed Parking with Elevator	163,900	375	0.0129	0.0017	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	3,807,972	0.00
High Turnover (Sit Down Restaurant)	2,413,397	47,723
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	3,807,972	0.00
High Turnover (Sit Down Restaurant)	2,413,397	47,723
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	79.8	—
High Turnover (Sit Down Restaurant)	94.6	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	79.8	—
High Turnover (Sit Down Restaurant)	94.6	—
Enclosed Parking with Elevator	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

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

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

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

7. Health and Equity Details

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Per Project Plans, the Project Site is 1.51 acres with a building gross square footage of 121,389 square feet.
Construction: Construction Phases	Per construction schedule from assumptions sheet
Operations: Energy Use	Per SMAQMD BMP 1, the Project will be built without natural gas infrastructure.


IMPACT
SCIENCES

APPENDIX B

Cultural Resources Evaluation

California Historical Resources Information System

NORTH CENTRAL INFORMATION CENTER

AMADOR
EL DORADO
NEVADA
PLACER
SACRAMENTO
YUBA

California State University, Sacramento
6000 J Street, Folsom Hall, Suite 2042
Sacramento, California 95819-6100
phone: (916) 278-6217
fax: (916) 278-5162
email: ncic@csus.edu

6/29/2023 NCIC File No.: SAC-23-128

Eleni Getachew
Impact Sciences
811 W, 7th Street, Suite 200
Los Angeles, CA 90017

Records Search Results for
APNs: 251-0325-004, 251-0325-005, 251-0325-006, 251-0325-008, 251-0325-009, 251-0325-010, and 251-0325-011) located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive in the City of Sacramento

Eleni Getachew:

Per your request received by our office on 6/29/2023, a complete records search was conducted by searching California Historic Resources Information System (CHRIS) maps for cultural resource site records and survey reports in Sacramento County within a 1/4-mile radius of the proposed project area.

Review of this information indicates that the proposed project area contains **0** recorded indigenous-period/ethnographic-period cultural resource(s) and **0** recorded historic-period cultural resource(s). Additionally, **0** cultural resources study report(s) on file at this office cover(s) a portion of the proposed project area.

Outside the proposed project area, but within the 1/4-mile radius, the broader search area contains **0** recorded indigenous-period/ethnographic-period cultural resource(s) and **5** recorded historic-period cultural resource(s): Arcade Creek Levee, Strader Residence, historic well, transmission tower, and a historic house at 3132 Palmer Street. Additionally, **12** cultural resources study report(s) on file at this office cover(s) a portion of the broader search area.

In this part of Sacramento County, archaeologists locate indigenous-period/ethnographic-period habitation sites "along streams or on ridges or knolls, especially those with southern exposure" (Moratto *1984*: 290). This region is known as the ethnographic-period territory of the Nisenan, also called the Southern Maidu. The Nisenan maintained permanent settlements along major rivers in the Sacramento Valley and foothills; they also periodically traveled to higher elevations (Wilson and Towne *1978*: 387-389). The proposed project search area is situated in the Sacramento Valley about 215 feet south of Arcade Creek. The subject property has experienced past development. Given the extent of known cultural resources and the environmental setting, there is **low potential** for locating indigenous-period/ethnographic-period cultural resources within the proposed project area.

The 1902 Fair Oaks and 1911 Arcade USGS topographical maps shows evidence of early twentieth-century Marysville Boulevard and an unpaved road and buildings in the vicinity of the subject property. The 1950 Rio Linda 7.5' USGS topographical map shows evidence of twentieth-century Hagginwood neighborhood, Marysville Boulevard, Ermina Drive, and Arcade Boulevard bounding the subject property. Historic aerial images from 1947 and 1957 show several buildings at the location of the subject property. By 2016 all but one building had been demolished. The remaining building at 3201 Marysville Boulevard was built in 1961. Given the extent of known cultural resources and patterns of local history, there is **high potential** for locating historic-period cultural resources within the proposed project area. Although the building at 3201 Marysville Boulevard is over 50 years old, it does not appear to possess character defining features of an architectural style.

LITERATURE REFERENCED DURING SEARCH:
In addition to the official records and maps for sites and studies in Sacramento County, the following inventories and references were also reviewed: National Register of Historic Places and California Register of Historical Resources - Listed properties; California Inventory of Historic Resources (*1976*); California State Historical Landmarks; California Points of Historical Interest; Office of Historic Preservation Built Environment Resources Directory; Office of Historic Preservation Archaeological Resources Directory; Caltrans State and Local Bridge Surveys; Gold Districts of California (Clark *1970*); California Gold Camps (Gudde *1975*); California Place Names (Gudde *1969*); Historic Spots in California (Hoover et al. *1966* [1990]); Trail of the First Wagons Over the Sierra Nevada (Graydon *1986*); California Archaeology (Moratto *1984*); and the Smithsonian Institution's Handbook of North American Indians, Volume 8, California (Wilson and Towne *1978*).

SENSITIVITY STATEMENT:

1) With respect to cultural resources, it appears that the proposed project area **is not sensitive**.

2) Should the lead agency/authority require a cultural resources survey, a list of qualified local cultural resources consultants can be found at http://chrisinfo.org. Please forward copies of any resulting reports and resource records from this project to the North Central Information Center (NCIC) as soon as possible. The lead agency/authority and cultural resources consultant should coordinate sending documentation to NCIC. Digital materials are preferred and can be sent to our office via our file transfer system. Please contact NCIC for instructions.

3) If cultural resources are encountered during the project, avoid altering the materials and their context until a qualified cultural resources professional has evaluated the project area. Project personnel should not collect cultural resources. Indigenous-period/ethnographic-period resources include: chert or obsidian flakes, projectile points, and other flaked-stone artifacts; mortars, grinding slicks, pestles, and other groundstone tools; and dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic-period resources include: stone or adobe foundations or walls; structures and remains with square nails; mine shafts, tailings, or ditches/flumes; and refuse deposits or bottle dumps, often located in old wells or privies.

4) Identified cultural resources should be recorded on DPR 523 (A-L) historic resource recordation forms, available at https://ohp.parks.ca.gov/?page_id=28351.

5) Review for possible historic-period cultural resources has included only those sources listed in the referenced literature and should not be considered comprehensive. The Office of Historic Preservation has determined that buildings, structures, and objects 45 years or older may be of historical value. If the area of potential effect contains such properties not noted in our research, they should be assessed by an architectural historian before commencement of project activities.

Due to processing delays and other factors, it is possible that not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the California Historical Resources Information System (CHRIS) Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

Thank you for using our services. Please contact North Central Information Center at ncic@csus.edu or (916) 278-6217 if you have any questions about this records search.

Sincerely,

Paul Rendes, Coordinator
North Central Information Center

APPENDIX C

Noise Report

Sacramento Mixed-Use Apartments Project

Noise and Vibration Technical Report

August 2023

Prepared for:

City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

Prepared by:

Impact Sciences, Inc.
811 W. 7th Street, Suite 200
Los Angeles, CA 90017

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

The purpose of this report is to evaluate the potential for noise and groundborne vibration impacts resulting from implementation of the proposed project at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive (Project) in the City of Sacramento (City).This report includes an evaluation of potential impacts associated with the temporary increases in ambient noise levels in the vicinity of the Project Site; exposure of people in the vicinity of the Project Site to excessive noise or groundborne vibration levels; and whether exposure is in excess of standards established in the City's General Plan or Noise Ordinance. This report has been prepared by Impact Sciences, Inc., in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA).

1.1 PROJECT LOCATION

The Project Site located at 3201 to 3231 Marysville Boulevard and 3206 to 3212 Ermina Drive is approximately 1.51 acres and is comprised of 7 parcels (APNs: 251-0325-004, 251-0325-005, 251-0325-006, 251-0325-008, 251-0325-009, 251-0325-010, and 251-0325-011). The Project Site is within the North Sacramento Community Plan Area and is bound by Arcade Boulevard to the south, Marysville Boulevard to the east, and Ermina Drive to the west and north. The Project Site is approximately 215 feet south of Arcade Creek and 350 feet south of Hagginwood Park.

The Project Site currently contains two vacant buildings on the parcel located on the south end of the Project Site at 3201 Marysville Boulevard (APN: 251-0325-006). The remaining six parcels to the north are vacant. The Project Site is generally surrounded by commercial uses, including a laundromat, health center, tire shop, mechanics shop, market, and accountant office. There are three single-family residential uses north of the Project Site across Ermina Drive, and two single-family residential uses west of the Project Site across Ermina Drive. The Project Site is located within the North Sacramento Community Plan Area and is designated as a Suburban Corridor in the 2035 Land Use and Urban Form map. The Project Site and its surrounding parcels are currently zoned General Commercial (C-2). See **Figure 1, Aerial Photograph of the Project Site**.

1.2 PROJECT DESCRIPTION

The applicant proposes to demolish two existing one-story vacant buildings (approximately 1,548 square feet of demolition) and construct a new mixed-use building (approximately 125,501 square feet) with ground floor commercial, parking garage, and four floors of apartments located above ("Project"). See **Figure 2** through **Figure 6**, for the Project Site Plans**.** The mixed-use development would include ground floor retail, coffee, or restaurant uses with public plazas for outdoor dining, and amenities, utilities, and

parking spaces for the above apartments. The apartments would be located on floors two through five and include a mix of one- and two-bedroom units.

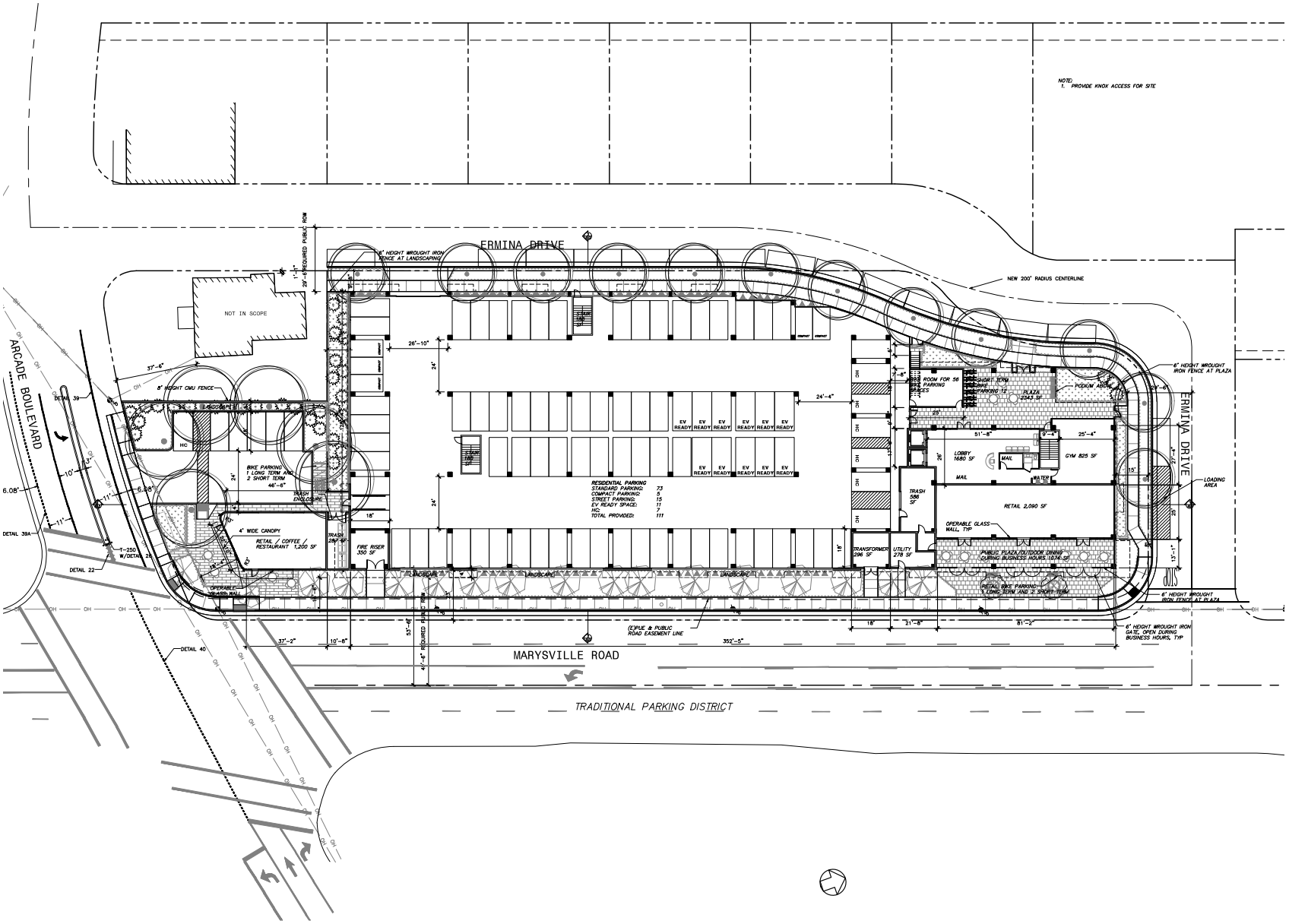
SOURCE: Esri, 2023

FIGURE 1

IMPACT SCIENCES

Aerial Photograph of the Project Site

1338.001•08/2023



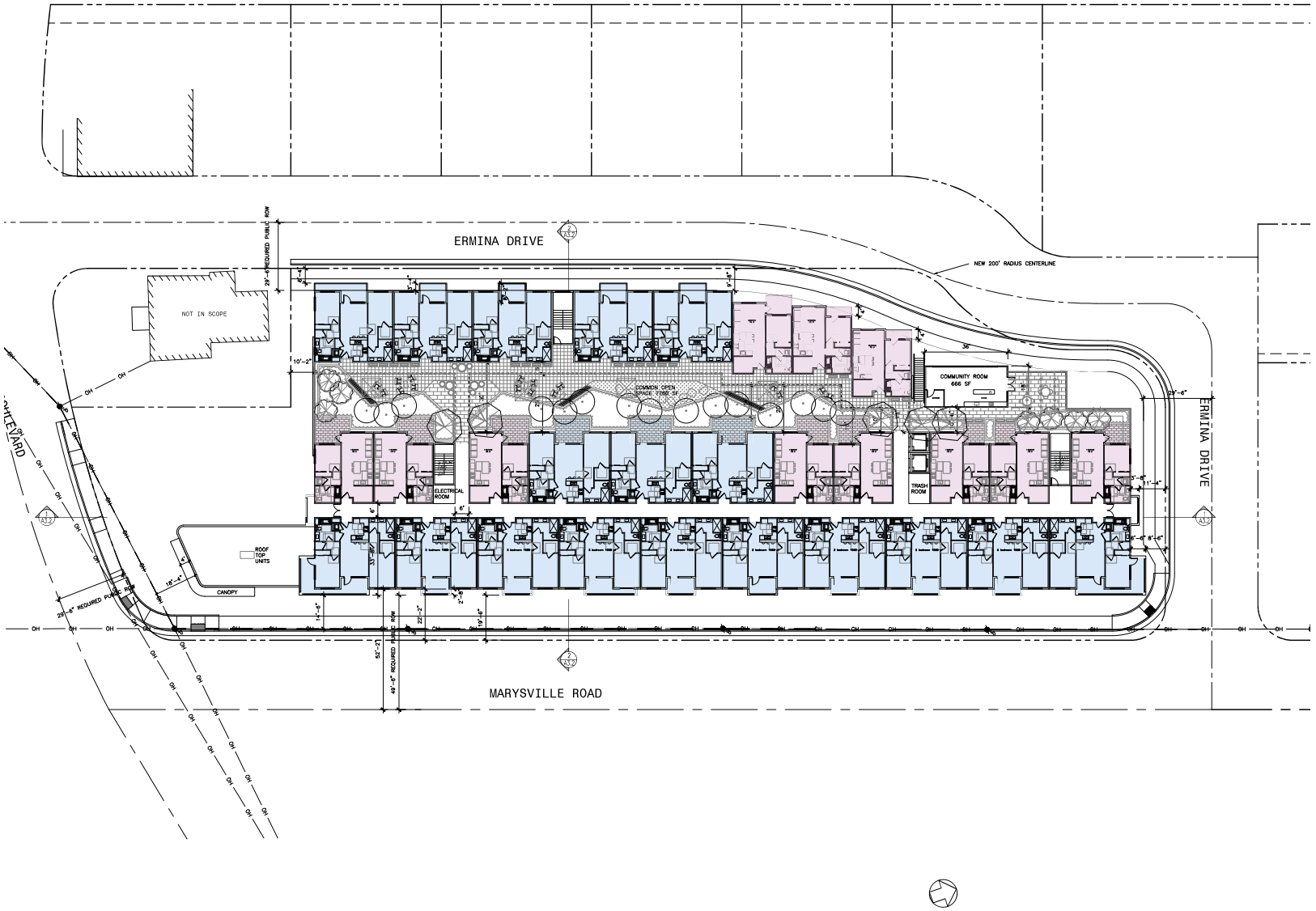
SOURCE: SCDC, 2023

FIGURE **2**

IMPACT SCIENCES

First Floor Plan

1338.001•08/2023



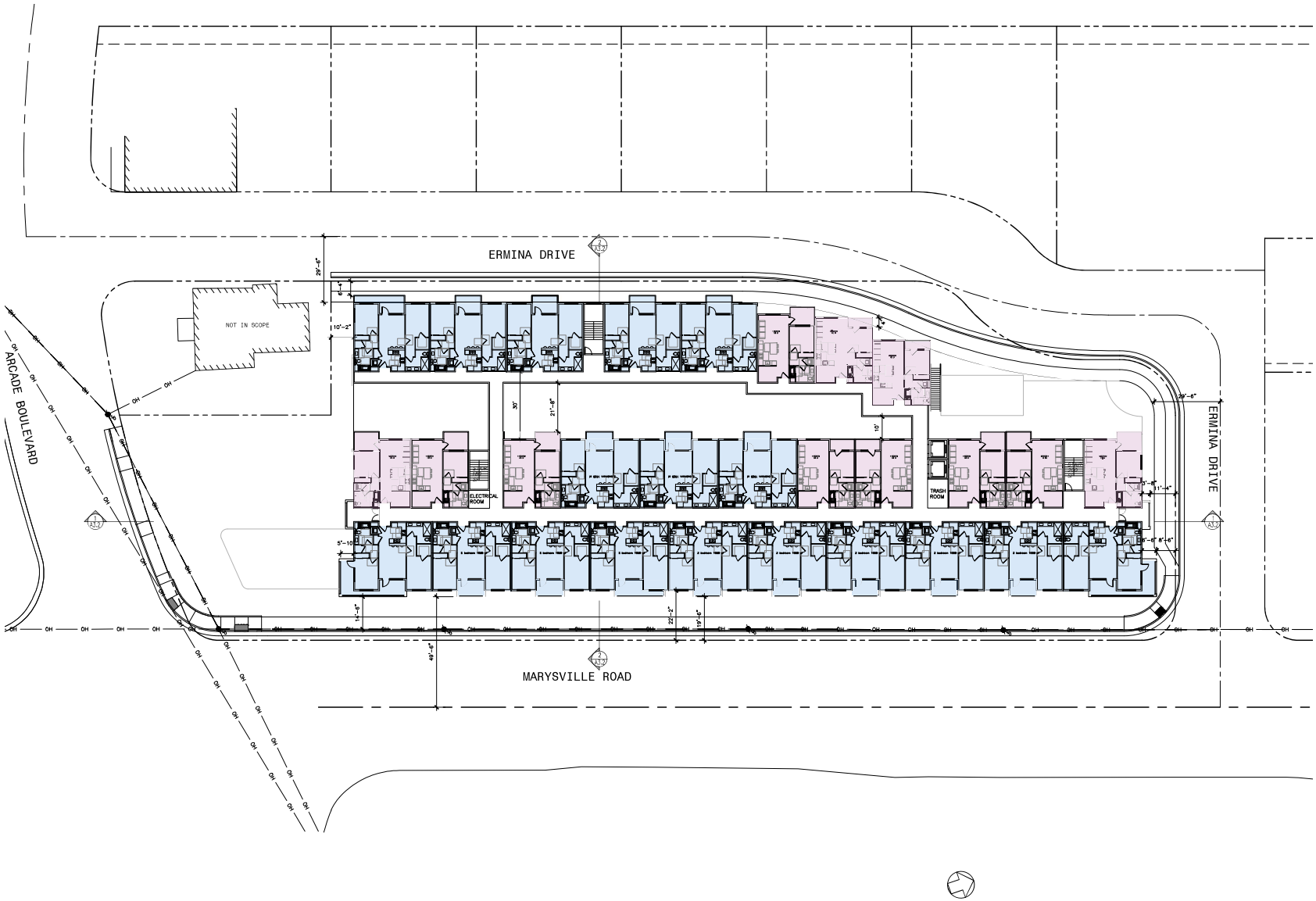
SOURCE: SCDC, 2023

FIGURE **3**

IMPACT SCIENCES

Second Floor Plan

1338.001•08/2023



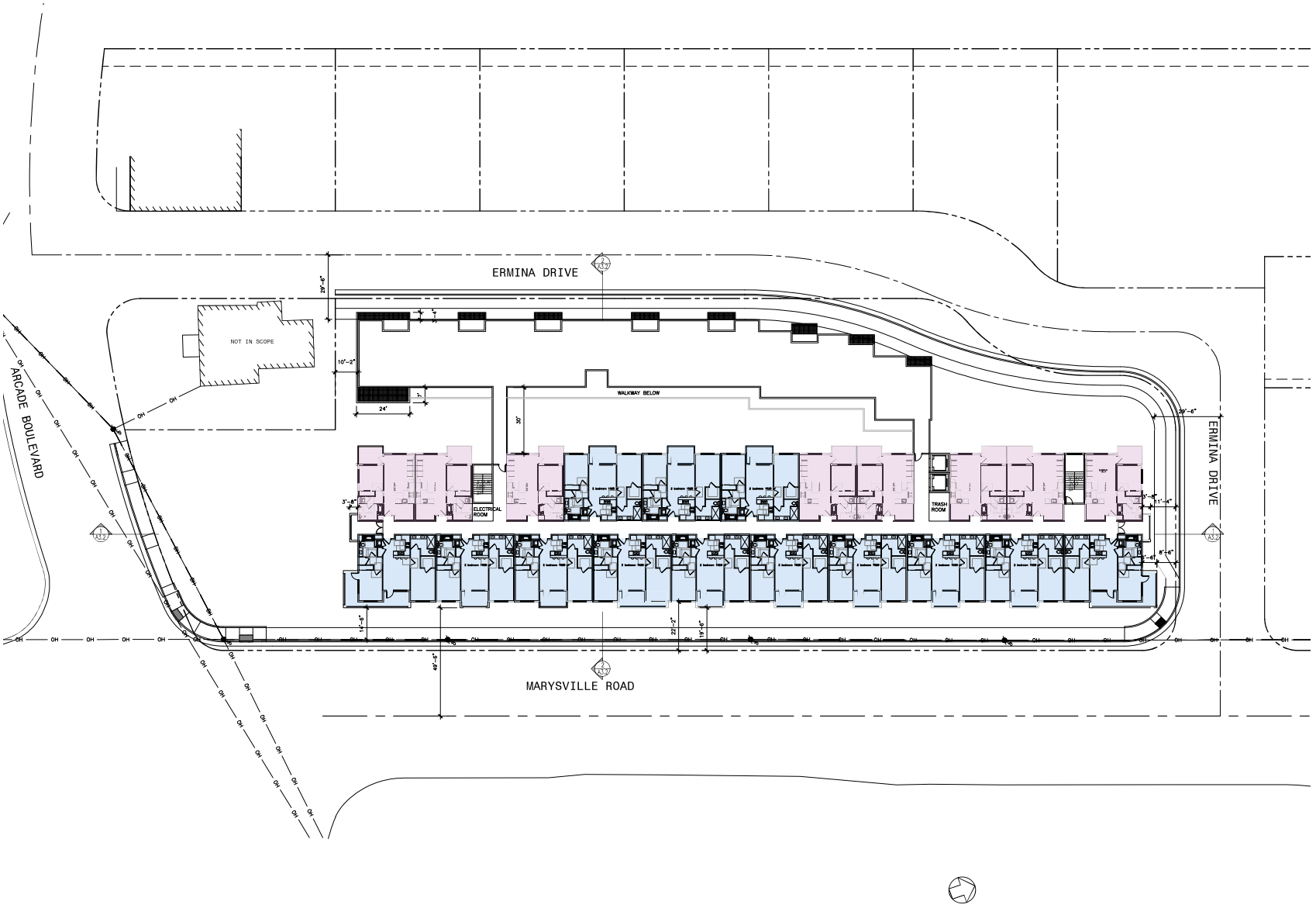
SOURCE: SCDC, 2023

FIGURE **4**

IMPACT SCIENCES

Third and Fourth Floor Plan

1338.001•08/2023



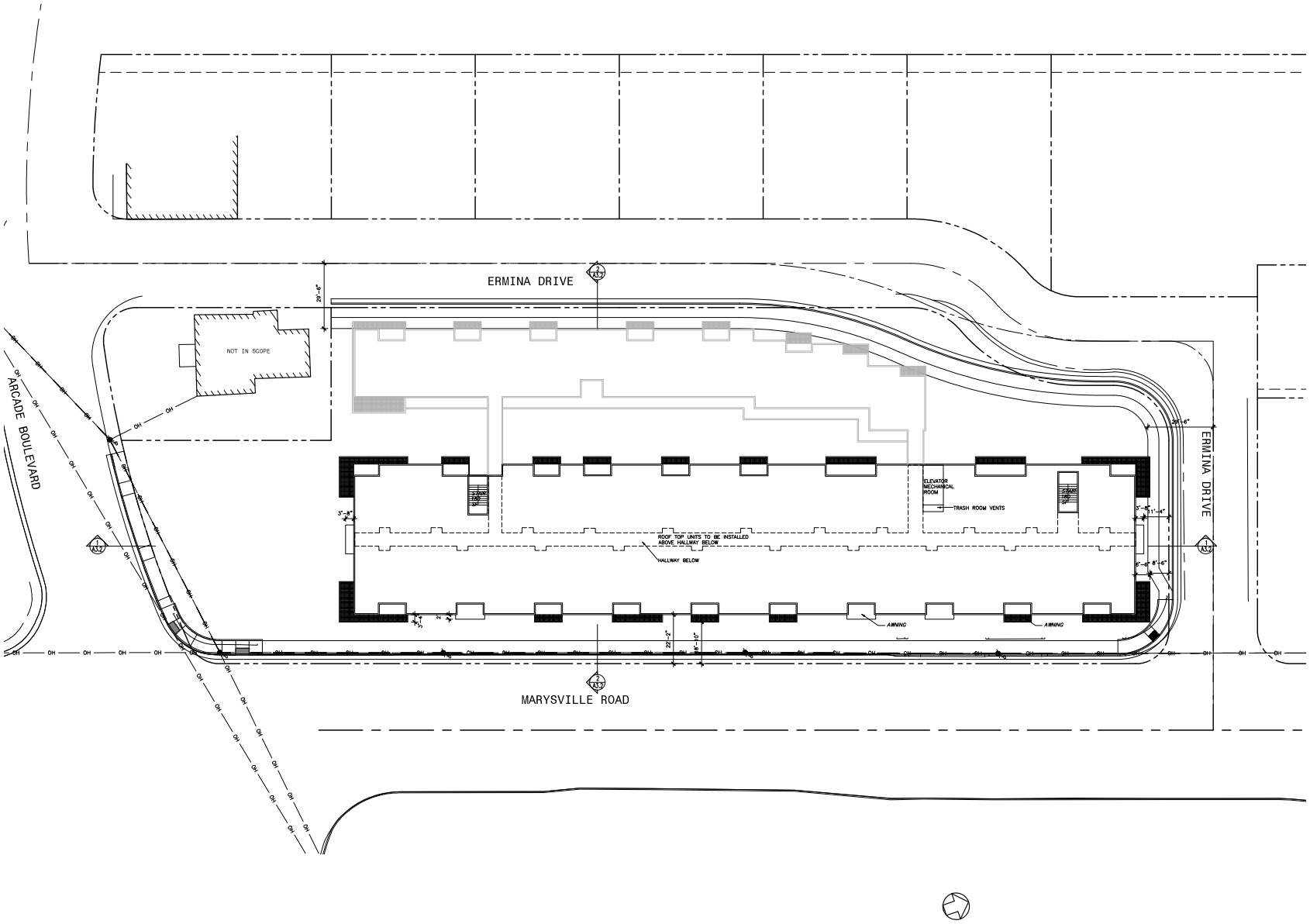
SOURCE: SCDC, 2023

FIGURE **5**

IMPACT SCIENCES

Fifth Floor Plan

1338.001•08/2023



SOURCE: SCDC, 2023

FIGURE 6

IMPACT SCIENCES

Roof Floor Plan

1338.001•08/2023

2.0 ENVIRONMENTAL SETTING

2.1 FUNDAMENTALS OF NOISE & VIBRATION

Noise

Noise is usually defined as unwanted sound that is an undesirable byproduct of society's normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, and/or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies. For example, the human ear is less sensitive to low and high frequencies than medium frequencies, which more closely correspond with human speech. In response to the sensitivity of the human ear to different frequencies, the A-weighted noise level (or scale), which corresponds better with people's subjective judgment of sound levels, has been developed. This A-weighted sound level, referenced in units of dB(A), is measured on a logarithmic scale such that a doubling of sound energy results in a 3 dB(A) increase in noise level. Typically, changes in a community noise level of less than 3 dB(A) are not noticed by the human ear.[1] Changes from 3 to 5 dB(A) may be noticed by some individuals who are sensitive to changes in noise. A greater than 5 dB(A) increase is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound.

On the A-weighted scale, the range of human hearing extends from approximately 3 to 140 dB(A). **Table 1, A-Weighted Decibel Scale**, provides examples of A-weighted noise levels from common sources. Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dB(A) at acoustically "soft" sites.[2] For example, if a noise source produces a noise level of 89 dB(A) at a reference distance of 50 feet, the noise level would be 83 dB(A) at a distance of 100 feet from the noise source, 77 dB(A) at a distance of 200 feet, and so on. Noise generated by a mobile source will decrease by approximately 3 dB(A) over hard surfaces and 4.5 dB(A) over soft surfaces for each doubling of distance.

---

1 California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed August 16, 2023.

2 Federal Highway Administration, *Highway Noise Fundamentals*, (1980) 97. Examples of "hard" or reflective sites include asphalt, concrete, and hard and sparsely vegetated soils. Examples of acoustically "soft" or absorptive sites include soft, sand, plowed farmland, grass, crops, heavy ground cover, etc.

Table 1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dB(A), Leq)
Threshold of Pain	140
Jet Takeoff at 100 Meters	125
Jackhammer at 15 Meters	95
Heavy Diesel Truck at 15 Meters	85
Conversation at 1 Meter	60
Soft Whisper at 2 Meters	35

Source: United States Occupational Safety & Health Administration, Noise and Hearing Conservation Technical Manual, 1999.

Sound levels also can be attenuated by man-made or natural barriers (e.g., sound walls, berms, and ridges), as well as elevational differences. Noise is most audible when traveling by direct line-of-sight, an interrupted visual path between the noise source and noise receptor. Barriers, such as walls or buildings that break the line-of-sight between the source and the receiver, can greatly reduce noise levels from the source since sound can only reach the receiver by diffraction. However, if a barrier is not high or long enough to break the line-of-sight from the source to the receiver, its effectiveness is greatly reduced.

Solid walls and berms may reduce noise levels by 5 to 10 dB(A) depending on their height and distance relative to the noise source and the noise receptor.[3] Sound levels may also be attenuated 3 dB(A) by a first row of houses and 1.5 dB(A) for each additional row of houses.[4] The minimum noise attenuation provided by typical structures in California is provided in **Table 2, Building Noise Reduction Factors**.

[3] Federal Highway Administration, *Highway Noise Mitigation*, (1980) 18.

[4] California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed August 16, 2023.

Table 2
Building Noise Reduction Factors

Building Type	Window Condition	Noise Reduction Due to Exterior of the Structure (dB(A))
All	Open	10
Light Frame	Ordinary Sash (closed)	20
	Storm Windows	25
Masonry	Single Glazed	25
	Double Glazed	35

Source: Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance. December 2011.

Sound Rating Scales

Various rating scales approximate the human subjective assessment to the "loudness" or "noisiness" of a sound. Noise metrics have been developed to account for additional parameters, such as duration and cumulative effect of multiple events. Noise metrics are categorized as single event metrics and cumulative metrics, as summarized below.

In order to simplify the measurement and computation of sound loudness levels, frequency weighted networks have obtained wide acceptance. The A-weighted scale, discussed above, has become the most prominent of these scales and is widely used in community noise analysis. Its advantages are that it has shown good correlation with community response and is easily measured. The metrics used in this analysis are all based upon the dB(A) scale.

Equivalent Noise Level

Equivalent Noise Level (Leq) is the sound level corresponding to a steady-state A-weighted sound level containing the same total energy as several single event noise exposure level events during a given sample period. Leq is the "acoustic energy" average noise level during the period of the sample. It is based on the observation that the potential for noise annoyance is dependent on the total acoustical energy content of the noise. The equivalent noise level is expressed in units of dB(A). Leq can be measured for any period, but is typically measured for 15 minutes, 1 hour, or 24 hours. Leq for a 1-hour period is used by the Federal Highway Administration (FHWA) for assessing highway noise impacts. Leq for 1 hour is referred to as the Hourly Noise Level (HNL) in the California Airport Noise Regulations and is used to develop Community

Noise Equivalent Level values for aircraft operations. Construction noise levels and ambient noise measurements in this section use the Leq scale.

Community Noise Equivalent Level

Community Noise Equivalent Level (CNEL) is a 24-hour, time-weighted energy average noise level based on the A-weighted decibel. It is a measure of the overall noise experienced during an entire day. The term "time-weighted" refers to the penalties attached to noise events occurring during certain sensitive periods. In the CNEL scale, 5 decibels (dB) are added to measured noise levels occurring between the hours of 7 P.M. and 10 P.M. For measured noise levels occurring between the hours of 10 P.M. and 7 A.M., 10 dB are added. These decibel adjustments are an attempt to account for the higher sensitivity to noise in the evening and nighttime hours and the expected lower ambient noise levels during these periods. Existing and projected future traffic noise levels in this section use the CNEL scale.

Day-Night Average Noise Level

The day-night average sound level (Ldn) is another average noise level over a 24-hour period. Noise levels occurring between the hours of 10 P.M. and 7 A.M. are increased by 10 dB. This noise is weighted to take into account the decrease in community background noise of 10 dB(A) during this period. Noise levels measured using the Ldn scale are typically similar to CNEL measurements.

Adverse Effects of Noise Exposure

Noise is known to have several adverse effects on humans, which has led to laws and standards being set to protect public health and safety, and to ensure compatibility between land uses and activities. Adverse effects of noise on people include hearing loss, communication interference, sleep interference, physiological responses, and annoyance. Each of these potential noise impacts on people is briefly discussed in the following narrative.

Hearing Loss

Hearing loss is generally not a community noise concern, even near a major airport or a major freeway. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry, very noisy work environments with long-term exposure, or certain very loud recreational activities (e.g., target shooting and motorcycle or car racing). The Occupational Safety and Health Administration (OSHA) identifies a noise exposure limit of 90 dB(A) for 8 hours per day to protect from hearing loss (higher limits are allowed for shorter duration exposures). Noise levels in neighborhoods, even in very noisy neighborhoods, are not sufficiently loud enough to cause hearing loss.

Communication Interference

Communication interference is one of the primary concerns in environmental noise. Communication interference includes speech disturbance and intrusion with activities such as watching television. Noise can also interfere with communications such as within school classrooms. Normal conversational speech is in the range of 60 to 65 dB(A) and any noise in this range or louder may interfere with speech.

Sleep Interference

Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages, and cause awakening. Noise may even cause awakening that a person may or may not be able to recall.

Physiological Responses

Physiological responses are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, and other physical changes. Studies to determine whether exposure to high noise levels can adversely affect human health have concluded that, while a relationship between noise and health effects seems plausible, there is no empirical evidence of the relationship.

Annoyance

Annoyance is an individual characteristic and can vary widely from person to person. Noise that one person considers tolerable can be unbearable to another of equal hearing capability. The level of annoyance depends both on the characteristics of the noise (including loudness, frequency, time, and duration), and how much activity interference (such as speech interference and sleep interference) results from the noise. However, the level of annoyance is also a function of the attitude of the receiver. Attitudes may also be affected by the relationship between the person affected and the source of noise, and whether attempts have been made to abate the noise.

Vibration

Vibration consists of waves transmitted through solid material. Groundborne vibration propagates from a source through the ground to adjacent buildings by surface waves. Vibration may comprise a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating and is measured in hertz (Hz). Most environmental vibrations consist of a composite, or "spectrum" of many frequencies, and are generally classified as broadband or random vibrations. The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than one Hz to a high of about 200 Hz. Vibration is often measured in terms of the peak

particle velocity (PPV) in inches per second (in/sec) when considering impacts on buildings or other structures, as PPV represents the maximum instantaneous peak of vibration that can stress buildings. Because it is a representation of acute vibration, PPV is often used to measure the temporary impacts of short-term construction activities that could instantaneously damage-built structures. Vibration is often also measured by the root mean squared (RMS) because it best correlates with human perception and response. Specifically, RMS represents "smoothed" vibration levels over an extended period of time and is often used to gauge the long-term chronic impact of a Project's operation on the adjacent environment. RMS amplitude is the average of a signal's squared amplitude. It is most commonly measured in decibel notation (VdB).

Vibration energy attenuates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. High frequency vibrations reduce much more rapidly than low frequencies, so that in the far-field from a source, the low frequencies tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, there is usually a ground-to-foundation coupling loss (i.e., the foundation of the structure does not move in sync with the ground vibration), but the vibration can also be amplified by the structural resonances of the walls and floors. Vibration in buildings is typically perceived as rattling of windows or items on shelves, or the motion of building surfaces. At high levels, vibration can result in damage to structures.

Manmade groundborne vibration is generally limited to areas within a few hundred feet of certain types of construction activities, especially pile driving. Road vehicles rarely create enough groundborne vibration to be perceptible to humans unless the road surface is poorly maintained and there are potholes or bumps. If traffic induces perceptible vibration in buildings, such as window rattling or shaking of small loose items (typically caused by heavy trucks in passing), then it is most likely an effect of low-frequency airborne noise or ground characteristics. Human annoyance by vibration is related to the number and duration of events. The more events or the greater the duration, the more annoying it will be to humans.

Construction vibration damage criteria are assessed based on structural category (e.g., reinforced-concrete, steel, or timber). The Federal Transit Administration (FTA) guidelines consider 0.2 inch/sec PPV to be the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber have a vibration damage criterion of 0.5 inch/sec PPV pursuant to FTA Guidelines.[5] The FTA Guidelines include a table showing the vibration damage criteria based on structural category and is presented below in **Table 3, Construction Vibration Damage Criteria.**

[5] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 16, 2023.

Table 3
Construction Vibration Damage Criteria

Building/Structural 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	0.12

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual. September 2018.

2.2 NOISE SENSITIVE RECEPTORS

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The closest noise sensitive receptors are single-family residences located 35 feet to the west and to the north of the Project Site, the Good Samaritan Church of God/the Hagginwood Academy for Children located 50 feet to the east of the Project Site, single-family residences located 135 feet from the southeast corner of the Project Site, and a single-family residence 125 feet from the southwest corner of the Project Site. See **Figure 7, Sensitive Receptor Map.**

2.3 EXISTING CONDITIONS

According to the Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update Noise and Vibration section, the roadway segment of Marysville Boulevard from Arcade Boulevard to Del Paso Boulevard has an existing noise level of 60.0 CNEL dB(A) at 50 feet.[6] The main sources of groundborne vibration near the Project Site are heavy-duty vehicular travel (e.g., private vehicles, delivery trucks and transit buses) on local roadways. Trucks and buses typically generate groundborne vibration

6 City of Sacramento, *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update – Noise and Vibration*, 2014. Available at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/Public-Draft-MEIR081114.pdf?la=en, accessed August 16, 2023.

velocity levels of around 63 VdB at 50 feet, and these levels could reach 72 VdB where trucks and buses pass over bumps in the road.[7] In terms of PPV levels, a heavy-duty vehicle traveling at a distance of 50 feet can result in a vibration level of approximately 0.001 inch per second.

7 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed April 24, 2023

SOURCE: Esri, 2023

FIGURE 7

IMPACT SCIENCES

Sensitive Receptor Map

1338.001•08/2023

3.0 REGULATORY FRAMEWORK

3.1 FEDERAL REGULATIONS

Occupational Health and Safety Act of 1970

Under the Occupational Safety and Health Act of 1970 (29 U.S.C. §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 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.[8]

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (U.S. EPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, U.S. EPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{dn} of 55 dB(A) and an indoor L_{dn} of 45 dB(A). These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. Moreover, the federal noise standards are not reflective of urban environments that range by land use, density, proximity to commercial or industrial centers, etc. As such, for purposes of determining acceptable sound levels to determine and evaluate intrusive noise sources and increases, this document utilizes the County of San Bernardino Noise Regulations, discussed below.

Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from activities associated with the Project. However, the Federal Transit Administration (FTA) has adopted vibration criteria for use in evaluating vibration impacts from construction activities. The vibration damage criteria adopted by the FTA are shown in **Table 4, Construction Vibration Damage Criteria.**

8 United States Department of Labor, *Occupational Safety and Health Act of 1970*. Available online at: https://www.osha.gov/laws-regs/oshact/completeoshact, accessed August 16, 2023.

Table 4
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	0.12

Source: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.

3.2 STATE REGULATIONS

Office of Planning and Research Guidelines for Noise Compatible Land Use

The State of California has not adopted statewide standards for environmental noise, but the Governor's Office of Planning and Research (OPR) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The City has developed its own compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines, see **Table 6,** later in this report. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with 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.

Caltrans Vibration/Groundborne Noise Standards

The State of California has not adopted Statewide standards or regulations for evaluating vibration or groundborne noise impacts from land use development projects. Although the State has not adopted any vibration standard, Caltrans recommends the following vibration thresholds that are more practical than those provided by the FTA.[9] See **Table 5, Guideline Vibration Damage Potential Threshold Criteria.**

The state noise and vibration guidelines are to be used as guidance with respect to planning for noise, not standards and/or regulations to which the City must adhere.

9 Caltrans, *Transportation and Construction Vibration Guidance Manual*, 2020.

Table 5
Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (inch/sec)	
	Transient Sources[1]	Continuous/Frequent Intermittent Sources[2]
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

Source: Table 19, Transportation and Construction Vibration Guidance Manual (Caltrans 2020).
1 Transient sources create a single, isolated vibration event, such as blasting or drop balls.
2 Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Title 24, California Code of Regulations

The California Noise Insulation Standards of 1988 (California Code of Regulations Title 24, Section 3501 et seq.) require that interior noise levels from the exterior sources not exceed 45 dB(A) Ldn/community noise equivalent level (CNEL)[10] in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings) with doors and windows closed. Where exterior noise levels exceed 60 dB(A) CNEL/Ldn, an acoustical analysis is required to show that the building construction achieves an interior noise level of 45 dB(A) CNEL/Ldn or less.

10 Measurements are based on Ldn or CNEL.

3.2 LOCAL PLANS AND POLICIES

City of Sacramento 2035 General Plan

The City of Sacramento 2035 General Plan was adopted in March 2015, and guides the City in the implementation of creating a sustainable city through goals, policies, and implementation programs.[11] The General Plan's Citywide Goals and Polices tab contains a Citywide Goals and Polices section, which contains an Environmental Restraints chapter that establishes policies to protect residents, businesses, and visitors from noise hazards by establishing exterior and interior noise standard. The following goals and policies are relevant to the Proposed Project:

Goal EC 3.1. **Noise Reduction.** Minimize noise impacts on human activity to ensure the health and safety of the community.

Policy EC 3.1.1 **Exterior Noise Standards.** The City shall require noise mitigation for all development where the projected exterior noise levels exceed those shown in **Table 6**, to the extent feasible.

Table 6
Exterior Noise Compatibility Standards for Various Land Uses

Land Use Type	Highest Level of Noise Exposure that is Regarded as "Normally Acceptable"[a] (Ldn[b], or CNEL[c])
Residential – Low Density Single Family, Duplex, Mobile Homes	60 dB(A)
Residential – Multi-family	65 dB(A)
Urban Residential Infill and Mixed-Use Projects	70 dB(A)
Transient Lodging – Motels, Hotels	65 dB(A)
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dB(A)
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dB(A)
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dB(A)
Office Buildings – Business, Commercial, and Professional	70 dB(A)
Industrial, Manufacturing, Utilities, Agriculture	75 dB(A)

Source: City of Sacramento. 2015. Environmental Restraints Section of the City of Sacramento 2035 General Plan – Table EC 1. Available at: Environmental-Constraints.pdf (cityofsacramento.org)

11 City of Sacramento, *Environmental Restraints Section of the City of Sacramento 2035 General Plan*, 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Environmental-Resources.pdf?la=en, accessed August 16, 2023.

Policy EC 3.1.2 Exterior Incremental Noise Standards. The City shall require noise mitigation for all development that increase existing ambient noise levels by more than the allowable increment shown in **Table 7**, to the extent feasible.

Table 7
Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dB(A))

Residences and Buildings Where People Normally Sleep		Institutional Land Uses With Primarily Daytime and Evening Uses	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{dn}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Source: City of Sacramento. 2015. Environmental Restraints Section of the City of Sacramento 2035 General Plan – Table EC 2. Available at: Environmental-Constraints.pdf (cityofsacramento.org)

Policy EC 3.1.3 **Interior Noise Standards.** The City shall require new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dB(A) Ldn (with windows closed) for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dB(A) Leq (peak hour with windows closed) for office buildings and similar uses.

Policy EC 3.1.5 **Interior Vibration Standards.** The City shall require construction projects anticipated to generate a significant amount of vibration to ensure acceptable interior vibration levels at nearby residential and commercial uses based on the current City or Federal Transit Administration (FTA) criteria.

Policy EC 3.1.8 **Operational Noise.** The City shall require mixed-use, commercial, and industrial projects to mitigate operational noise impacts to adjoining sensitive uses when operational noise thresholds are exceeded.

Policy EC 3.1.10 **Construction Noise.** The City shall require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

Policy EC 3.1.11 **Alternatives to Sound Walls.** The City shall encourage the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics.

North Sacramento Community Plan

The Project Site is within the North Sacramento Community Plan. The Community Plan, adopted alongside the Sacramento 2035 General Plan Update, establishes the community's vision, acknowledges community issues, and establishes policies to improve the community. Policies that are relevant to the Project are listed below:[12]

NS.LU 1.1 **Development North of Business 80.** The City shall encourage development north of Business 80 in a manner which emphasizes neighborhood cohesiveness and variety of housing types.

NS.LU 1.5 **Noise Sensitive Land.** The City shall avoid the placement of noise-sensitive land uses adjacent to the Western Pacific and Union Pacific railroad lines that form the western and eastern borders of the North Sacramento Community.

City of Sacramento Municipal Code

The Sacramento Municipal Code (Municipal Code) contains several references to noise control.[13] Sections of the Municipal Code relevant to the Project are listed below:

Article II. Noise Standards

8.68.060 Exterior noise standards

A. The following noise standards unless otherwise specifically indicated in this article shall apply to all agricultural and residential properties.

   1. From seven a.m. to ten p.m. the exterior noise shall be fifty-five (55) dB(A).

   2. From ten p.m. to seven a.m. the exterior noise standard shall be fifty (50) dB(A).

---

12 City of Sacramento, *North Sacramento Community Plan*, 2015. Available at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/North-Sacramento.pdf?la=en, accessed August 16, 2023.

13 City of Sacramento, *Sacramento, California City Code*, Title 8, Health and Safety. Available online at: https://library.qcode.us/lib/sacramento_ca/pub/city_code/item/title_8-chapter_8_68, accessed August 16, 2023.

B. It is unlawful for any person at any location to create any noise which causes the noise levels when measured on agricultural or residential property to exceed for the duration of time set forth following, the specified exterior noise standards in any one hour by:

Cumulative Duration of the Intrusive Sound:	**Allowance Decibels:**
1. Cumulative period of 30 minutes per hour	0
2. Cumulative period of 15 minutes per hour	+5
3. Cumulative period of 5 minutes per hour	+10
4. Cumulative period of 1 minute per hour	+15
5. Level not to be exceeded for any time per hour	+20

C. Each of the noise limits specified in subsection B of this section shall be reduced by five dB(A) for impulsive or simple tone noises, or for noises consisting of speech or music.

D. If the ambient noise level exceeds that permitted by any of the first four noise limit categories specified in subsection B of this section, the allowable noise limit shall be increased in five dB(A) increments in each category to encompass the ambient noise level. If the ambient noise level exceeds the fifth noise level category, the maximum ambient noise level shall be the noise limit for that category.

8.68.070 Interior noise standards

A. In any apartment, condominium, townhouse, duplex or multiple dwelling unit it is unlawful for any person to create any noise from inside his or her unit that causes the noise level when measured in a neighboring unit during the periods ten p.m. to seven a.m. to exceed:

1. Forty-five (45) dB(A) for a cumulative period of more than five minutes in any hour;

2. Fifty (50) dB(A) for a cumulative period of more than one minute in any hour;

3. Fifty-five (55) dB(A) for any period of time.

B. If the ambient noise level exceeds that permitted by any of the noise level categories specified in subsection A of this section, the allowable noise limit shall be increased in five dB(A) increments in each category to encompass the ambient noise level.

8.68.080 Exemptions

D. Noise sources due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. The director of building inspections may permit work to be done during the hours not exempt by this subsection in the case of urgent necessity and in the interest of public health and welfare for a period not to exceed three days. Application for this exemption may be made in conjunction with the application for the work permit or during progress of the work.

4.0 NOISE ANALYSIS

4.1 THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the *State CEQA Guidelines*, Project related noise and vibration impacts would be considered significant if it would cause:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project Site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive ground-borne vibration or ground-borne noise levels; and
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.

The *State CEQA Guidelines* do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines and recommendations by the FTA to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used in this analysis to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration would be considered significant if the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at any building that is constructed with reinforced-concrete, steel, or timber;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry buildings;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or
- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any historical building or building that is extremely susceptible to vibration damage.

In terms of groundborne vibration impacts associated with human annoyance, this analysis uses the FTA's vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are a frequent number of events per day, which would provide for the most conservative

vibration analysis. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations, 72 VdB at residences and buildings where people normally sleep, and 75 VdB at other institutional buildings.[14] The 65 VdB threshold applies to typical land uses where vibration would interfere with interior operations, 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. The 72 VdB threshold applies to all residential land uses and any buildings where people sleep, such as hotels and hospitals. The 75 VdB threshold applies 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.

The *State CEQA Guidelines* do not define the levels at which noise would be considered substantial increases. Thus, for purposes of this analysis, the Project would normally have a significant impact on noise levels from project operations if the project causes the ambient noise level measured at the property line of affected uses to increase beyond the exterior noise compatibility standards and incremental noise impact standards established earlier in **Table 6** and **Table 7.**

4.2 METHODOLOGY

Noise levels associated with project-related construction activities were calculated using the FHWA Roadway Construction Noise Model (RCNM). Noise levels were also compared to the City's noise ordinance, which includes provisions regarding construction noise levels. Specifically, the Municipal Code Section 8.68.080 exempts noise sources (including excavation), demolition, alteration or repair of any building or structure between the hours of seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order. As the Project would comply with the daytime construction hours established in the Municipal Code, this analysis also uses the FTA's general construction noise criteria of 90 dB(A) Leq (1-hour)[15] to provide additional context for the Project's potential to generate daytime construction noise impacts.

---

14 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 16, 2023.

15 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2 (General Assessment Construction Noise Criteria), September 2018.

4.3 IMPACT ANALYSIS

Impact NOI-1 **Would the Proposed Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project Site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? *(Less than Significant).***

Construction Impacts

Construction of the Project would require the use of heavy equipment for demolition, grading/site preparation/landscaping, and building construction. Construction activities would also involve the use of smaller power tools, generators, and other sources of noise. During each stage of construction, several types of equipment potentially could be operating concurrently and noise levels would vary based on the amount of equipment in operation and the location of the activity. The Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) has compiled data regarding the noise-generating characteristics of specific types of construction equipment and typical construction activities.

With the use of the RCNM, as detailed in **Appendix A** to this report,[16] the construction noise levels forecasted for the sensitive receptors are presented in **Table 8, Estimated Exterior Construction Noise at Sensitive Receptors.** Noise levels would diminish notably with distance from the construction site at a rate of 6 dB(A) per doubling of distance (noise from stationary or point sources is reduced by about 6 dB(A) for every doubling of distance at acoustically hard locations). For example, a noise level of 86 dB(A) Leq measured at 50 feet from the noise source to the receptor would decline to 80 dB(A) Leq at 100 feet from the source to the receptor and fall by another 6 dB(A) Leq to 74 dB(A) Leq at 200 feet from the source to the receptor. These noise attenuation rates assume a flat and unobstructed distance between the noise generator and the receptor. Intervening structures and vegetation would further attenuate (reduce) the noise. Furthermore, it should be noted that increases in noise levels at sensitive receptors during construction would be intermittent and temporary and would not generate continuously high noise levels.

16 Project construction noise levels were calculated based on the Project's anticipated mix of construction equipment with the FHWA RCNM Version 1.1.

Table 8
Estimated Exterior Construction Noise at Sensitive Receptors

Sensitive Land Uses[a]	Distance to Project Site (feet)[a]	Estimated Peak Construction Noise Levels [dB(A) 1-Hour Leq)]	Exceed FTA 90 dB(A) 1-Hour Leq Criteria?
1. Single family residence to the west	35	77.8	No
2. Single family residences to the north	35	77.8	No
3. The Good Samaritan Church of God/Hagginwood Academy for Children	50	74.6	No
4. Single family residences to the southeast	135	72.5	No
5. Single family residences to the southwest	125	75.1	No

Note: Per FTA guidance, calculations based off of two loudest pieces of equipment measured from center of site to receptor
*Source: Impact Sciences, Inc., August 2023. See **Appendix A** to this report for details related to equipment and distance assumptions.*

While construction activity would increase noise levels in the vicinity of the Project Site (see **Table 8**), the Project's construction activities would not exceed the FTA's general construction noise criteria of 90 dB(A) Leq (1-hour) at any sensitive receptors. Furthermore, Project construction would occur during the permitted periods between seven a.m. and six p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between nine a.m. and six p.m. on Sunday, and all operation of an internal combustion engines shall be equipped with suitable exhaust and intake silencers. Thus, the Project would be consistent with the criteria set forth in the City's Municipal Code. As such, construction noise impacts would be less than significant and no mitigation is required. While no mitigation measures are required, the Project would implement the following best management practices to reduce temporary construction impacts as feasible:

- Prior to issuance of any grading or building permit, the Project Applicant shall demonstrate to the satisfaction of the City's Building Official that construction noise reduction methods shall be used where feasible. These methods include shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and utilizing electric power tools.

- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors.

- Per the Municipal Code, construction shall be limited to the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and from 9:00 a.m. to 6:00 p.m. on Sunday.

Operational Impacts

Permanent Operational Traffic Noise

Traffic volumes for the Project were estimated from the defaults generated from CalEEMod. The Project is anticipated to generate a maximum of approximately 1,503 daily vehicle trips.[17] The closest roadway to the Project Site with a recorded average daily traffic volume is Marysville Boulevard, to the east of the Project Site. According to City data, this roadway segment carries approximately 13,037 average daily trips where Marysville Boulevard intersects with Arcade Boulevard.[18] Based on this data, it is clear the Project's 1,503 daily trips would not have the potential double traffic volumes on existing roadways in the vicinity of the Project Site. Since it would take a doubling (i.e., a 100% increase) of roadway traffic volume to increase noise levels by 3 dB(A), the addition of traffic volume from operation of the Project would not increase traffic to levels capable of producing a 3 dB(A) ambient noise increase. Additionally, the Project is consistent with the surrounding land uses, which currently generate mobile noise sources typical of a residential neighborhood. As such, any noise increase would be imperceptible, and impacts would be ***less than significant***.

Stationary Noise Sources

New mechanical equipment, HVAC units, and exhaust fans are included as a part of the Project design. Although the operation of this equipment would generate noise, the design of these on-site HVAC units and exhaust fans would be required to comply with the regulations of the City Code. Specifically, Section 8.68.060 of the City Code establishes exterior noise standards that apply to residential properties. Noises from stationary sources such as heating, air conditioning, and ventilation systems should not result in exceedance of the 55 dB(A) threshold during daytime hours and 50 dB(A) during nighttime hours. As such, compliance with Section 8.68.060 of the City Code would ensure noise from stationary sources would be ***less than significant***.

Impact NOI-2 **Would the Proposed Project result in the generation of excessive groundborne vibration or groundborne noise levels? *(Less than Significant).***

The FTA provides ground-borne vibration impact criteria with respect to building damage during construction activities. PPV, expressed in inches per second, is used to measure building vibration damage.

17 Impact Sciences. *CalEEMod Output for the Sacramento Mixed-Use Apartments Project*. 2023.

18 City of Sacramento, "Traffic Counts," 1990. Available online at: https://www.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps/Traffic-Counts, accessed August 16, 2023.

Construction vibration damage criteria are assessed based on structural category (e.g., reinforced-concrete, steel, or timber). FTA guidelines consider 0.2 inch/sec PPV to be the significant impact level for non-engineered timber and masonry buildings. Structures or buildings constructed of reinforced concrete, steel, or timber have a vibration damage criterion of 0.5 inch/sec PPV pursuant to FTA guidelines.[19] Although the nearby structures appear to be constructed of reinforced concrete, steel, or timber, this analysis conservatively applies the 0.2 inch/sec PPV threshold typically applied to non-engineered timber and masonry buildings.

The vibration levels at nearby buildings are shown below in **Table 9, Vibration Levels at Off-Site Buildings from Project Construction.**

Table 9
Vibration Levels at Off-Site Buildings from Project Construction

Sensitive Uses Off-Site[a]	Distance to Project Site (ft.)	Receptor Significance Threshold PPV (in./sec)	Estimated PPV (in/sec)/
1. Single family residence to the west	35	0.2	0.054
2. Single family residence to the north	35	0.2	0.054
3. The Good Samaritan Church of God/Hagginwood Academy for Children	50	0.2	0.031
4. Single family residences to the southeast	135	0.2	0.007
5. Single family residences to the southwest	125	0.2	0.008

*Source: Impact Sciences, Inc., August 2023. See **Appendix A** to this report.*

The vibration velocities predicted to occur at the nearest buildings would be 0.054 in/sec PPV. These nearby structures are considered to be constructed of reinforced concrete, steel, or timber which have a vibration damage criterion of 0.5 inch/sec PPV pursuant to FTA guidelines. However, as stated earlier, the Project was conservatively assessed against the more conservative threshold typically applied to non-engineered timber and masonry buildings. As shown in **Table 9**, Project construction vibration levels would not have the potential to exceed this standard and this impact would be less than significant.

19 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 16, 2023.

Impact NOI-3 **For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport, would the project expose people residing or working in the project area to excessive noise levels? *(Less than Significant).***

The Project Site is located within the McClellan Air Force Base Comprehensive Land Use Plan and is located approximately 2.5 miles southwest of Sacramento McClellan Airport. The McClellan Air Force Base officially closed on July 13, 2001, and has been converted to McClellan Park, a private industrial park with corporate aviation, freight, technology, and other industrial sectors.[20] While the Project is within an airport land use plan, the land use plan for the McClellan Air Force Base was adopted in 1987 and was later amended in December of 1992, and the McClellan Air Force Base officially closed on July 13, 2001.[21] According to the more recent North Sacramento Community Plan, the Project Site is located outside of the 65 CNEL noise contour and is not located within 2 miles of the Sacramento McClellan Airport. Therefore, no impacts with respect to airstrip or airport related noise would occur and no further analysis is required.

---

20 City of Sacramento, *North Sacramento Community Pla*n, 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/North-Sacramento.pdf?la=en, accessed August 16, 2023.

21 Airport Land Use Commission, *McClellan Air Force Base Comprehensive Land Use Plan*, 1987. Available online at: https://www.sacog.org/sites/main/files/file-attachments/mcclellan_afb_clup_amend_dec_1992_-_93-014.pdf?1456339912, accessed August 16, 2023.

5.0 REFERENCES

Airport Land Use Commission. *McClellan Air Force Base Comprehensive Land Use Plan*. 1987. Available online at: https://www.sacog.org/sites/main/files/file-attachments/mcclellan_afb_clup_amend_dec_1992_-_93-014.pdf?1456339912, accessed August 16, 2023.

California Department of Transportation (Caltrans). *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. 2013. Available online at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf, accessed August 16, 2023.

Caltrans, *Transportation and Construction Vibration Guidance Manual*, 2020.

City of Sacramento. "Traffic Counts." 1990. Available online at: https://www.cityofsacramento.org/Public-Works/Transportation/Traffic-Data-Maps/Traffic-Counts, accessed August 16, 2023.

City of Sacramento. *Draft Master Environmental Impact Report for the City of Sacramento 2035 General Plan Update – Noise and Vibration*. 2014. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Environmental-Impact-Reports/2035-GP-Update/Public-Draft-MEIR081114.pdf?la=en, accessed August 16, 2023.

City of Sacramento. *Environmental Restraints Section of the City of Sacramento 2035 General Plan.* 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/General-Plan/2035-GP/Environmental-Resources.pdf?la=en, accessed August 16, 2023.

City of Sacramento. *North Sacramento Community Plan.* 2015. Available online at: https://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Planning/Community-Plans/North-Sacramento.pdf?la=en, accessed August 16, 2023.

City of Sacramento. *Sacramento, California City Code*. Title 8, Health and Safety. Available online at: https://library.qcode.us/lib/sacramento_ca/pub/city_code/item/title_8-chapter_8_68, accessed August 16, 2023.

Federal Highway Administration, *Highway Noise Fundamentals*, (1980) 97.

Federal Highway Administration, *Highway Noise Mitigation*, (1980) 18.

Federal Transit Administration. *Transit Noise and Vibration Impact Assessment Manual*. 2018. Available online at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf, accessed August 16, 2023.

Impact Sciences. *CalEEMod Output for the Sacramento Mixed-Use Apartments Project*. 2023.

United States Occupational Safety & Health Administration. *Noise and Hearing Conservation Technical Manual*. 1999.

United States Department of Labor. *Occupational Safety and Health Act of 1970*. Available online at: https://www.osha.gov/laws-regs/oshact/completeoshact, accessed August 16, 2023.

APPENDIX A

Noise and Vibration Technical Data

Report date: 8/14/2023
Case Description: Sacramento Mixed Use Apartments

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family residence to the west	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	195	0
Pavement Scarafier	No	20		89.5	195	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	77.8	70.8
Pavement Scarafier	77.7	70.7
Total	77.8	73.7

*Calculated Lmax is the Loudest value.

Per FTA guidance, calculations based off of two loudest pieces of equipment measurent from center of site to receptor.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family residences to the north	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	195	0
Pavement Scarafier	No	20		89.5	195	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	77.8	70.8
Pavement Scarafier	77.7	70.7
Total	77.8	73.7

*Calculated Lmax is the Loudest value.

Per FTA guidance, calculations based off of two loudest pieces of equipment measurent from center of site to receptor.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Good Samaritan Church of God/Hagginwood	Commercial	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	279	0
Pavement Scarafier	No	20		89.5	279	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	74.6	67.7
Pavement Scarafier	74.6	67.6
Total	74.6	70.6

*Calculated Lmax is the Loudest value.

Per FTA guidance, calculations based off of two loudest pieces of equipment measurent from center of site to receptor.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family residences to the southeast	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	358	0
Pavement Scarafier	No	20		89.5	358	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	72.5	65.5
Pavement Scarafier	72.4	65.4
Total	72.5	68.5

*Calculated Lmax is the Loudest value.

Per FTA guidance, calculations based off of two loudest pieces of equipment measurent from center of site to receptor.

---- Receptor #5 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family residences to the southwest	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	264	0
Pavement Scarafier	No	20		89.5	264	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Saw	75.1	68.1
Pavement Scarafier	75	68.1
Total	75.1	71.1

*Calculated Lmax is the Loudest value.

Per FTA guidance, calculations based off of two loudest pieces of equipment measurent from center of site to receptor.

Sacramento Mixed Use Apartments Project — Single family residences to the southwest

Ref= Reference vibration level (PPV)

RefD= Reference distance for Reference vibration level (Feet)

Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	125	Distance from equipment to sensitive receptor
Equip=	0.008	

Peak demolition vibration based on utilizing a large bulldozer.

Source: FTA Tranist Noise and Vibration Impact Assessment, 2006.

Sacramento Mixed Use Apartments Project — Single family residence to the north

Ref= Reference vibration level (PPV)

RefD= Reference distance for Reference vibration level (Feet)

Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	35	Distance from equipment to sensitive receptor
Equip=	0.054	

Peak demolition vibration based on utilizing a large bulldozer.

Source: FTA Tranist Noise and Vibration Impact Assessment, 2006.

Sacramento Mixed Use Apartments Project — Single family residence to the west

Ref= Reference vibration level (PPV)

RefD= Reference distance for Reference vibration level (Feet)

Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	35	Distance from equipment to sensitive receptor
Equip=	0.054	

Peak demolition vibration based on utilizing a large bulldozer.

Source: FTA Tranist Noise and Vibration Impact Assessment, 2006.

Sacramento Mixed Use Apartments Project — Good Samaritan Church/Hagginwood Academy

Ref= Reference vibration level (PPV)

RefD= Reference distance for Reference vibration level (Feet)

Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	50	Distance from equipment to sensitive receptor
Equip=	0.031	

Peak demolition vibration based on utilizing a large bulldozer.

Source: FTA Tranist Noise and Vibration Impact Assessment, 2006.

Sacramento Mixed Use Apartments Project — Single family residences to the southeast

Ref= Reference vibration level (PPV)

RefD= Reference distance for Reference vibration level (Feet)

Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	135	Distance from equipment to sensitive receptor
Equip=	0.007	

Peak demolition vibration based on utilizing a large bulldozer.

Source: FTA Tranist Noise and Vibration Impact Assessment, 2006.