CITY OF PALO ALTO

NOTICE OF EXEMPTION

PROJECT TITLE:

739 Sutter Avenue Residential Project

PROJECT LOCATION:

739 Sutter Avenue, Palo Alto, CA 94303 (APN #127-35-200)

PROJECT DESCRIPTION:

The proposed project would involve demolition of the existing 8-unit apartment building and construction of 12 townhomes in two separate three-story buildings on a 0.38-acre site. Two of the 12 units would be below market rate and would be designated at a rate affordable to low income. Accordingly, the project includes concessions and waivers in accordance with state density bonus law. The project also includes a Vesting Tentative Map application to allow for a condominium subdivision.

NAME OF PUBLIC AGENCY APPROVING THE PROJECT:

City of Palo Alto

NAME OF PERSON OR GROUP CARRYING OUT PROJECT:

Contact: Ge Sun (Grace Li)
P.O. Box 6563
San Mateo, CA 94403

EXEMPT STATUS

- ☐ Ministerial (Sec. 21080(b)(1); 15268)
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a))
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c))
- ☒ Categorical Exemption: CEQA Guidelines Section 15332
- ☐ Statutory Exemptions.

REASONS WHY
PROJECT IS EXEMPT:

The project is consistent with the City's Comprehensive Plan and Zoning Ordinance and is within city limits on a project site less than 5 acres surrounded by urban uses. The project site has no value as habitat for endangered, rare, or threatened species and the project would not result in significant effects related to traffic, noise, air quality or water quality. The site can be served by required utilities and public services. No exceptions to the applicability of a categorical exemption as specified in CEQA Guidelines Section 15300.2(a) through (f) would apply to the project.

A link to the Class 32 Categorical Exemption can be found here:
https://www.cityofpaloalto.org/Departments/Planning-Development-Services/Current-Planning/Projects/739-Sutter-Ave

PROJECT PLANNER:

Claire Raybould
Planning and Development Services
(650) 329-2116

IF FILED BY APPLICANT:

1. Attach certified document of exemption finding. ☐Yes
2. Declare if a Notice of Exemption has been filed by the public agency approving the project ☒N/A

DocuSigned by:
Claire Raybould
7F016B4B2DB74ED...

Signature (Public Agency)	*Title*	*Date*
	Principal Planner	*4/26/2022*

739 Sutter Avenue Residential Project

Class 32 Categorical Exemption Report

prepared by

City of Palo Alto
Planning & Development Services Department
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Claire Raybould, Senior Planner

prepared with the assistance of

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

March 2024

RINCON CONSULTANTS, INC. SINCE 1994

Table of Contents

Tables

Figures

Appendices

1 Introduction

This report serves as the technical documentation of an environmental analysis for the 739 Sutter Avenue Residential Project in the City of Palo Alto. The intent of the analysis is to document whether the project is eligible for a Class 32 Categorical Exemption (CE). The report provides an introduction, project description, and evaluation of the project's consistency with the requirements for a Class 32 exemption. The report concludes that the project is eligible for a Class 32 CE.

The State of California's *CEQA Guidelines* Section 15332 states that a CE is allowed when:

a. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
c. The project site has no value as habitat for endangered, rare, or threatened species.
d. Approval of the project would not result in any significant effects relating to traffic[1], noise, air quality, or water quality.
e. The site can be adequately served by all required utilities and public services.

Additionally, *CEQA Guidelines* Section 15300.2 outlines exceptions to the applicability of a Categorical Exemption, including cumulative impacts, significant effects due to unusual circumstances, scenic highways, hazardous waste sites, and historical resources. A full listing of these exceptions and an assessment of their applicability to the proposed project is provided in this report.

The City, in coordination with Rincon Consultants, Inc., evaluated the project's consistency with the above requirements, including its potential impacts in the areas of biological resources, traffic, noise, air quality, greenhouse gas emissions (GHG), and water quality to confirm the project's eligibility for the Class 32 exemption.

[1] Impacts related to parking are not discussed in this report, as such impacts are generally not considered as a physical effect on the environment under CEQA.

2 Project Description

2.1 Project Location and Setting

The project site encompasses one Assessor's parcel (APN #127-35-200) that is approximately 0.38 acres in size and is located at 739 Sutter Avenue in the City of Palo Alto, Santa Clara County. The project site has a Palo Alto Comprehensive Plan land use designation of Multi-Family Residential and is zoned Low Density Multiple-Family Residence District (RM-20).

The project site is bounded by Sutter Avenue to the southeast, single-family residential development to the northeast and northwest, and multi-family residential development to the southeast and southwest. Figure 1 shows the regional location of the project site and Figure 2 shows the project site in its immediate context.

The project site is currently developed with an 8-unit single-story apartment building. The project site is generally flat and includes landscaped areas throughout the site. Access to the site is provided via a driveway on Sutter Avenue.

2.2 Project Characteristics

The proposed project would involve demolition of the existing apartment building and construction of 12 townhomes in two separate three-story buildings. Each townhome would have three bedrooms, an attached garage, and an outdoor balcony. The proposed site plan is shown on Figure 3.

Each of the 12 residential units would include two vehicle parking spaces and one bicycle parking space within the attached garages. Two short-term (visitor) bicycle parking spaces would be provided in the northeastern corner of the project site.

Two of the 12 units would be offered at below market rates, thus making the project eligible for a density bonus pursuant to the State Density Bonus Law and the Palo Alto Municipal Code (PAMC) Chapter 18.15. The applicant has requested a 50 percent density bonus in addition to related waivers, concessions, and incentives in accordance with these regulations, to allow for the following modifications to the code standards:

- Floor area ratio (1.4:1 where 1.25:1 is allowed)
- Maximum site coverage (50 percent where 35 percent is allowed)
- Minimum front yard setback (5 feet where 20 feet is required)
- Minimum interior side yard setback (4.6 feet where 10 feet is required)
- Side lot line daylight plane (10 feet, 82 degrees where 10 feet, 45 degrees is required)
- Private street width (20 ft minimum where 32 feet is required)
- Minimum finished floor height (0.5 feet where 1.5 feet is required)
- Upper floor stepback (stepback of 6 feet for 33% of the east façade on building 1 where 6 feet for 70% of the façade is required at 33-37 feet in height)

Figure 1 Regional Location

Imagery provided by Esri and its licensors © 2021.

Project Location

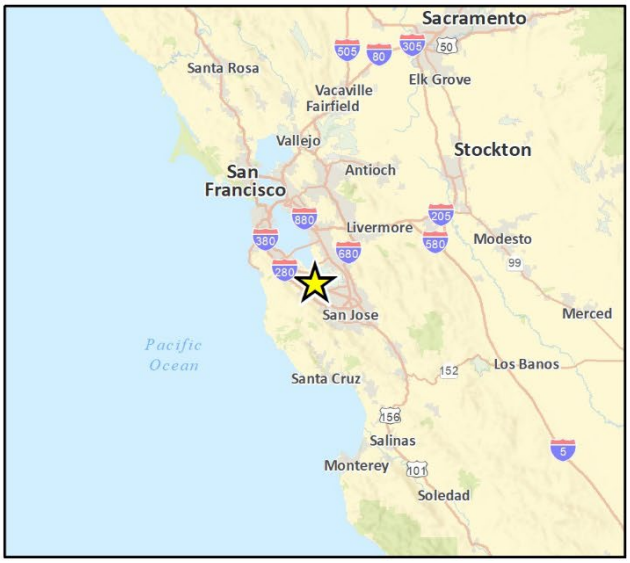
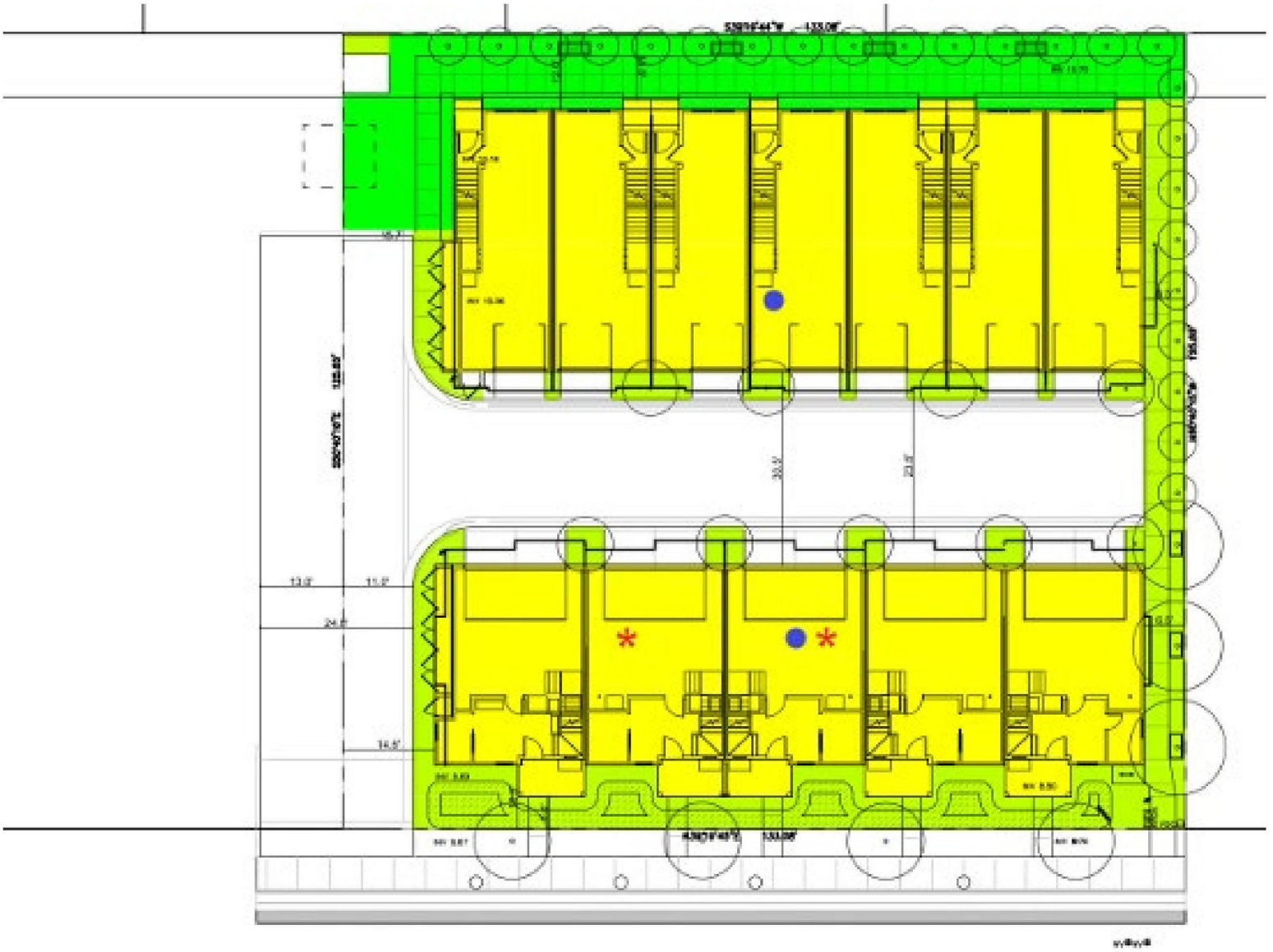


Figure 2 Project Site Location

Imagery provided by Microsoft Bing and its licensors © 2023.

23-14767 EPS
Fig 2 Project Site Location

Figure 3 Proposed Site Plan



- Façade break (1-foot by 4-foot break with minimum 8.9 square foot area where 2-foot by 4-foot break with 32 square foot area is required)
- Individual residential entry width (4.5 feet for Building 2 entry stoops where 5 feet is required)
- Landscaping screening (no trees along the west interior side yard [shared drive aisle] where one tree every 25 feet is required)
- Landscape coverage (34% where 35% is required)
- Sidewalk width for shared path from public right-of-way to bicycle parking (4 ft minimum with 1.5 ft shoulders where 8 ft minimum with 2 ft shoulders is required).

The following concession is also requested:

- Building height (33.5 feet maximum height where 30 feet is allowed)

The project is also utilizing State density bonus law to allow for tandem parking on seven of the 12 units. The project would comply with all other development standards required in the RM-20 zone. The RM-20 standards are summarized in Table 1.

Table 1 Proposed Project Characteristics

Project Characteristic	Required	Proposed
Address	–	739 Sutter Avenue
Assessor's Parcel Number	–	127-35-200
Gross/Net Lot Area[1]	8,500 sf/8,500 sf minimum	16,707 sf gross/13,093 sf net
Lot Coverage	5,847 sf (35%)	8,294 sf (50%)
Floor Area[1]	16,366 sf (1:25:1:0)	18,256 sf (1.4:1.0)
Front Yard Setback	20 ft	10 ft building, 5 ft porch
Interior Side Yard Setback	10 ft	4.5 ft min
Interior Rear Yard Setback	10 ft	12 ft
Height	30 ft	33 ft, 6 inches 3 stories above grade
Residential Units	8 units maximum (20 units per acre)	12 units (with 50% density bonus)
Vehicle Parking	Two spaces per unit (24 total spaces), maximum tandem parking percentage 25%	Two garage spaces per unit (24 total spaces), tandem parking percentage 58%
Bicycle Parking	Long Term: 1 space/unit (12 spaces total) Short Term: 1 space/ 10 units (1 space total)	12 long term spaces, 2 short term spaces

[1] The total gross floor area is calculated pursuant to Palo Alto Municipal Code §18.04.030. "Gross floor area" means the total area of all floors of a building measured to the outside surfaces of exterior walls. Net lot area is the area of a lot measured horizontally between bounding lot lines, but excluding any portion of a flag lot providing access to a street and lying between a front lot line and the street, and excluding any portion of a lot within the lines of any natural watercourse, river, stream, creek, waterway, channel, or flood control or drainage easement and excluding any portion of a lot within a public or private street right-of-way whether acquired in fee, easement, or otherwise.

ft = feet or foot; sf = square feet

Landscaping and Open Space

There are three evergreen maple trees on or adjacent to the project site. The project would include the removal of the three trees, two of which are street trees. The proposed project would include planting twenty-four 24-inch box trees on site where seven 24-inch box replacement trees are required. The project would also include 1,689 square feet of landscaped space in the form of the aforementioned trees as well as shrubs, vines, and grasses.

The project would include 3,820 square feet of usable open space in the form of common and private open space (including ground level common open space and private balconies on Buildings 1 and 2). The project provides private open space in the form of second and third floor balconies on Building 1 and third floor balconies on Building 2 for a total of 1,582 square feet. Stoops in each unit on Building 2 provide additional amenity space for these units though they are not counted as open space as they do not meet the minimum dimension requirements.

Site Access and Circulation

Access to the project site would be provided via the existing driveway off Sutter Avenue on the southeastern side of the project site. The project includes a 24-foot-wide private access road in the center of the project site that would provide a 20-foot-wide street (plus 10.5 feet of driveway apron areas total) to provide direct access to the residential units. The project would include 24 parking spaces provided in two-car garages attached to the first floor of each unit. Pedestrian access would be provided along internal pathways between each building.

Utilities and Stormwater Management

City of Palo Alto Utilities (CPAU) provides electricity, natural gas, water, wastewater, and fiber optics services to the city. The City is currently contracted with GreenWaste of Palo Alto for collection of garbage, recycling, and composting services. Utility lines for the proposed project would be connected to existing infrastructure along Sutter Avenue.

The proposed project would include the construction of a 515-square-foot stormwater bioretention areas in the landscaped areas along the Sutter Avenue boundary of the project site. The center aisle of the project site would also be underlain with permeable grass pavers.

Construction

Project construction would occur over approximately 15 months. The project would include demolition of the existing 4,400 square-foot building on site. The project would utilize static rollers and would not utilize vibratory rollers. Pile drivers would also not be used in building construction.

3 Consistency Analysis

3.1 Criterion (a)

The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

The parcel at 739 Sutter Avenue (APN 127-35-200) is zoned RM-20. The site has a comprehensive land use designation of Multiple-Family Residential.

The City of Palo Alto has determined that the proposed project is consistent with the applicable 2030 Comprehensive Plan designations and policies as well as with applicable zoning designations and regulations, except where waivers and concessions are requested in accordance with State density bonus law. As described above in the Project Description, the project would comply with zoning ordinance requirements set forth in the Palo Alto Municipal Code (PAMC) related to building height, FAR, site coverage, front setback, street width, and accessory use location with density bonus concessions and waivers as required under State Density Bonus Law and PAMC Chapter 18.15. In addition, pursuant to PAMC Section 18.13.040(E)(2), the project is required to include 150 square feet of minimum usable open space per unit, including 75 square feet of minimum common usable open space per unit and 50 square feet of minimum private usable open space per unit. The project would exceed these requirements.

Applicable 2030 Comprehensive Plan policies include:

Goal L-2 **Promote an enhanced sense of "community" with development designed to foster public life, meet citywide needs and embrace the principles of sustainability.**

- **Policy L-2.3** As a key component of a diverse, inclusive community, allow and encourage a mix of housing types and sizes integrated into neighborhoods and designed for greater affordability, particularly smaller housing types, such as studios, co-housing, cottages, clustered housing, accessory dwelling units and senior housing.
- **Policy L-2.5** Support the creation of affordable housing units for middle to lower income level earners, such as City and school district employees, as feasible.
- **Policy L-2.11** Encourage new development and redevelopment to incorporate greenery and natural features such as green rooftops, pocket parks, plazas and rain gardens.

Goal L-3 **Safe, attractive residential neighborhoods, each with its own distinct character and within walking distance of shopping, services, schools, and/or other public gathering places.**

- **Policy L-3.1** Ensure that new or remodeled structures are compatible with the neighborhood and adjacent structures.
- **Policy L-3.4** Ensure that new multi-family buildings, entries and outdoor spaces are designed and arranged so that each development has a clear relationship to a public street.

Consistent with these policies, the project would involve multi-family development, including affordable units, in a neighborhood with mixed residential types and densities; would not decrease landscaping and tree cover on the site compared to existing conditions; would be within walking distance of key services including a grocery store (Safeway), a pharmacy (Walgreen's) and parks (Hoover Park); and would have front doors, balconies and windows directly on Sutter Avenue, creating a relationship with the public street.

The project would be consistent with the site's Comprehensive Plan land use designation, Comprehensive Plan policies, zoning designation, and zoning regulations. Therefore, the project would meet the requirements of *criterion (a)*.

3.2 Criterion (b)

The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

The project is located on an approximately 0.38-acre site within a developed urban neighborhood in the City of Palo Alto. It is immediately surrounded by urban uses on all sides. Therefore, the project would be consistent with *criterion (b)*.

3.3 Criterion (c)

The project site has no value as habitat for endangered, rare, or threatened species.

The project site is located within a developed urban area that lacks suitable habitat for sensitive animal or plant species. The project site is currently developed with an 8-unit apartment building and paving with limited, generally non-native landscaping and does not contain suitable habitat for sensitive species.

The project would include the removal of three trees on the property. The trees to be removed are on the perimeter of the project site. Since the trees are located in areas of high human activity and presence, and isolated from forestlands, water bodies, and other foraging habitat, they do not provide structure or habitat for substantial numbers of special status birds. Because the project was submitted prior to modifications to PAMC Title 8, the project is not subject to the revised ordinance requirements. However, because two of these trees are street trees and in accordance with the no net loss tree canopy provisions, they require replacement regardless.

The project would include planting new trees to replace the removed trees. As mentioned above in *Landscaping and Open Space*, the project would provide 24 new 24-inch box trees to replace the three trees removed. This satisfies the requirement of seven replacement trees.

A search on the U.S. Fish and Wildlife Services (USFWS) National Wetlands Inventory for the project site and surrounding area for the occurrences of wetlands concluded that there are no wetlands on or near the project site (USFWS 2023a). Additionally, according to the USFWS Threatened & Endangered Species Active Critical Habitat Report, the project site does not contain and is not adjacent to critical habitat for special status species (USFWS 2023b). The project site has no value as habitat for endangered, rare, or threatened species, and the project would meet the requirements under *criterion (c)*.

3.4 Criterion (d)

Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

The following discussion provides an analysis of the project's potential effects with respect to traffic, noise, air quality, and water quality.

A. Traffic

This analysis is based primarily on the Local Transportation Analysis prepared by W-Trans for the project in August 2023. This report is included in Appendix A.

Project Trip Generation

Vehicle trip generation rates were based on estimates from Trip Generation Manual, 11th Edition (Institute of Transportation Engineers [ITE] 2021), which are based on a compilation of empirical trip generation surveys at locations throughout the country to forecast the number of trips that would be generated by the project. The average trip rates for "Single Family Attached Housing" (Land Use 215) were applied to the proposed project. As shown in Table 2, the project is expected to generate a gross total of 86 daily trips, six morning (a.m.) peak hour trips, and seven afternoon (p.m.) peak hour trips from the proposed residential use. After subtracting the trips generated by the existing multi-family residential building on the site, which will be demolished, the project is estimated to result in a net increase of 32 daily trips, three a.m. peak hour trips, and three p.m. peak hour trips in comparison to existing conditions.

Table 2 Project Operation Trip Generation

Land Use	ITE Code	Size	Daily Trips	A.M. Peak Hour Trips			P.M. Peak Hour Trips		
				In	Out	Total	In	Out	Total
Existing Land Use									
Multifamily Housing (Low Rise)	220	8 du	(54)	(1)	(2)	(3)	(3)	(1)	(4)
Proposed Land Use									
Single Family Attached Housing	215	12 du	86	2	4	6	4	3	7
Net New Vehicle Trips (Proposed Land Use minus Existing Land Use)			**32**	**1**	**2**	**3**	**1**	**2**	**3**

du = Dwelling Unit, ( ) denotes subtraction

All rates are from Institute of Transportation Engineers, *Trip Generation Manual, 11th Edition, 2021.* Average rates used.

Source: W-Trans 2023 (Appendix A)

Vehicle Miles Traveled (VMT)

The City of Palo Alto has adopted thresholds of significance related to VMT in 2020 pursuant to Senate Bill (SB) 743 and the Governor's Office of Planning and Research (OPR) guidelines. The Palo Alto VMT criteria indicates that residential projects located in areas where the baseline VMT is 15 percent or higher below the existing county average VMT per resident would be considered as a low-VMT area and therefore presumed to have a less than significant VMT impact.

According to the Santa Clara Countywide VMT Evaluation Tool (Version 2), the countywide VMT per capita is 13.33 miles. Using the Palo Alto VMT criteria, a project generating a VMT of 11.33 miles per capita (15 percent or higher below existing county average) or less would have a less than significant impact on VMT. Table 3 shows the project VMT rate compared to the baseline and significance threshold.

Table 3 VMT Analysis – Baseline Compared to the Project

VMT Metric	Baseline VMT Rate	Significance Threshold	Project VMT Rate	Significance
Household VMT per Capita (Countywide Baseline)	13.33	11.33	8.09	Less than Significant

Source: W-Trans 2023 (Appendix A)

As shown in Table 3, the project would result in a VMT rate of 8.09 per capita, which is below the significance threshold of 11.33 miles per capita. The project's low VMT is due to the surrounding land uses and the project's location in proximity to transit services, since the project would be served by the Santa Clara Valley Transportation Authority (VTA; bud stops two blocks from the site on Middlefield Road) and Caltrain at the California Avenue Caltrain Station approximately 1.2 miles from the project site. Impacts to VMT would be less than significant.

Site Access

Access to the site was evaluated by W-Trans based on the proposed site plan to determine the adequacy of the project driveways with regard to sight distance and emergency vehicle access. As mentioned above in the Project Description, *Site Access and Circulation*, the project would continue to use the existing driveway fronting Sutter Avenue.

Sight Distance

Providing adequate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to see vehicles, pedestrians and bicyclists when exiting a driveway.

Sight distance requirements vary depending on the roadway speeds. The posted speed limit on Sutter Avenue is 25 miles per hour, for which the California Department of Transportation's (Caltrans) stopping sight distance is 150 feet. Thus, a driver exiting the project site must be able to see at least 150 feet on Sutter Avenue to stop and avoid a collision. A review in the field showed the available sight distance along Sutter Avenue from the project driveway exceeds 150 feet in each direction, which would satisfy minimum stopping sight distance requirements. The Local Transportation Analysis (Appendix A) concluded that with the trimming of vegetation near the project's driveways to a height of less than three feet and the trimming of trees so nothing hangs below a height of seven feet from the roadway surface, impacts to sight distance would be less than significant. PAMC Section 18.54.050 requires the trimming of vegetation near the project's driveways to a height of no more than three feet above driveway grade, and no more than three feet above parking lot grade in parking lots. With adherence to PAMC Section 18.54.050, impacts to sight distance would be less than significant.

Emergency Vehicle Access

The project would include 20- to 24-foot-wide drive aisles which would have sufficient width to accommodate two-way traffic operations for circulating vehicles, as well as parking maneuvers to/from covered parking spaces. Additionally, emergency response vehicles would be able to access the site via the use of trucks parked on Sutter Avenue. Ground ladder access is provided on each end of the two buildings and hoses would be used from the trucks on Sutter. Due to the existing overhead lines, aerial ladder access is not included in the proposed fire safety plan for this site, consistent with existing conditions. Sutter Avenue is at least 20 feet wide, which meets the minimum width of 20 feet for fire access required by the California Fire Code (CFC), Section 503.2.1, which states, "Fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders." Impacts to emergency vehicle access and circulation for the site would be less than significant.

On-Site Circulation

Pursuant to PAMC Section 18.54.070, drive aisles adjacent to 90-degree parking stalls are required to be 24 feet wide, to provide sufficient room for vehicles to back out of the parking stalls. The proposed internal drive aisle is 20 feet wide with an additional four to six feet of driveway apron for each garage, providing adequate back out space from each of the garages. As noted above, emergency vehicle access is not required for the site and the site would be served from Sutter Avenue consistent with existing conditions. Waste pick-up would also occur on Sutter due to both the overhead lines as well as due to the cul-de-sac design, consistent with existing conditions. This impact would be less than significant.

Truck Access and Circulation

According to PAMC Section 18.52.040, multi-family residential uses are not required to provide a loading space. Therefore, the project is not required to provide an on-site loading space. However, the 24-foot private street proposed for site access could be utilized by a truck if needed for a smaller delivery truck or other short-term needs such as Uber or Lyft. The proposed project improves the existing condition by widening the access aisle in comparison to the existing condition. This impact would be less than significant.

Parking Supply

Pursuant to PAMC Section 18.52.040, two parking stalls are required for each unit constructed. In accordance with Assembly Bill 2345, the project is only required to provide one and a half parking space per unit, though based on the design as private spaces, a total of 2 spaces per unit would be warranted. No guest parking is required in accordance with the municipal code and pursuant to AB 2345. The project would provide two parking spaces for each unit (for a total of 24 spaces) in the garages attached to each unit in compliance with local and state requirements. This impact would be less than significant.

Bicycle Parking

Pursuant to the City's bicycle parking standards (PAMC Section 18.52.040, Table 1), the project is required to provide one bicycle parking space per residential unit (all long-term), and one guest bicycle parking space per 10 residential units (all short-term). The project would include one long-term bicycle parking space (for a total of 12 long-term bicycle parking spaces) in each of the garages attached to each unit. The proposed project would also include two outdoor short-term parking

space in the northeastern corner of the project site. The project's bicycle parking would meet the City's standards. This impact would be less than significant.

Pedestrian, Bicycle, and Transit Analysis

The Comprehensive Plan *Transportation Element* contains the following applicable goals and policies to encourage the use of non-automobile transportation modes, including walking and bicycling, to achieve Palo Alto's mobility goals.

Goal T-1 Create a sustainable transportation system, complemented by a mix of land uses, that emphasizes walking, bicycling, use of public transportation and other methods to reduce GHG emissions and the use of single-occupancy motor vehicles.

Policy T-1.16 Promote personal transportation vehicles as an alternative to cars (e.g., bicycles, skateboards, roller blades) to get to work, school, shopping, recreational facilities and transit stops.

Policy T-1.17 Require new office, commercial and multi-family residential developments to provide improvements that improve bicycle and pedestrian connectivity as called for in the 2012 Palo Alto Bicycle + Pedestrian Transportation Plan.

Pedestrian Facilities

Pedestrians would access the site via the existing sidewalks along Sutter Avenue, which would be demolished and replaced by the proposed project. Internal pedestrian circulation within the site would be provided via a network of sidewalks and curb ramps. All pedestrian facilities would be built to satisfy City of Palo Alto Public Works Department standards pursuant to PAMC Section 18.54.050 and new guidelines in PAMC Section 18.24 (City of Palo Alto 2020), as well as the 2012 Palo Alto Bicycle and Pedestrian Transportation Plan (City of Palo Alto 2012). This impact would be less than significant.

Bicycle Facilities

According to the City of Palo Alto Bicycle and Pedestrian Transportation Plan (City of Palo Alto 2012), bikeways are classified into four categories:

- **Class I Bikeways/Multi-Use Paths:** A completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lanes:** A striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Routes:** Signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Bicycle Boulevards:** Bicycle boulevards are signed, shared roadways with especially low motor vehicle volumes such that motorists passing bicyclists can use the full width of the roadway. Bicycle boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding, and other measures.

Table 4 summarizes bicycle facilities in the project vicinity which are currently existing and planned as described in the City of Palo Alto Bicycle and Pedestrian Transportation Plan.

Table 4 Bicycle Facilities in Project Vicinity

Bicycle Facility	Type	Length (miles)	Begin Point	End Point
Existing				
Hoover Park	Class I	0.4	Middlefield Road	Cowper Street
Colorado Avenue (EB Only)	Class II	0.4	Louis Road	Middlefield Road
Colorado Avenue (WB Only)	Class III	0.4	Louis Road	Middlefield Road
Colorado Avenue	Class III	0.2	Middlefield Road	Cowper Street
Moreno Boulevard	Bicycle Boulevard	0.4	Louis Road	Middlefield Road
Ross Road	Bicycle Boulevard	1.7	Oregon Expressway	Louis Road
Planned				
Matadero Creek	Class I	1.5	Alma Street	Bayshore Road
Middlefield Road	Class II	0.5	Moreno Avenue	Loma Verde Avenue

See Appendix A for Local Transportation Analysis prepared by W-Trans

Source: City of Palo Alto 2012

The proposed project would be adequately served by existing and planned bicycle facilities. Further, the proposed project would not interrupt or otherwise impact existing or planned bicycle facilities. This impact would be less than significant.

Transit Services

Rail transit service is provided by Caltrain which has a station at 101 California Avenue approximately 1.2 miles from the project site. Bus transit service in the project vicinity is provided by the VTA. Within a half-mile walk of the project site there are bus stops VTA Routes 21, School 288, School 288L, and School 288M. According to the Local Transportation Analysis, if 20 percent of peak hour trips were made by transit, there would be one additional transit rider during each peak hour. This additional rider during each peak hour would not exceed the carrying capacity of existing transit services near the project site. Impacts related to transit service would be less than significant.

Conclusion

Compliance with standard City requirements would ensure that impacts related to traffic remain less than significant. VMT per capita from the project would be below the Palo Alto VMT significance criteria resulting in less than significant VMT impacts. Based on a review of the project site plan, site access along Sutter Avenue is adequate for on-site circulation and safety. Furthermore, the proposed project would not have an adverse effect on the existing transit, pedestrian, or bicycle facilities in the area. Therefore, the project would meet the requirements for Traffic under *criterion (d)*.

B. Noise

Noise Characteristics and Measurement

Noise is defined as unwanted sound that disturbs human activity. A noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

One of the most frequently used noise metrics that considers duration as well as sound power level is the equivalent noise level (L_{eq}). The L_{eq} is a steady A-weighted noise level that is equivalent to the amount of energy contained in the actual varying levels over a period of time (essentially, L_{eq} is the average sound level).

Noise Standards

The City's Comprehensive Plan Natural Environment Element includes goals and policies related to noise. This element establishes land use compatibility categories for community noise exposure (see Table 5). For residential uses, noise levels up to 60 dBA Ldn are identified as normally acceptable and noise levels between 60 and 75 dBA Ldn are identified as conditionally acceptable.

Table 5 Palo Alto Land Use Compatibility for Community Noise Environments

	Exterior Noise Exposure Ldn or CNEL or dB		
Land Use Category	**Normally Acceptable**	**Conditionally Acceptable**	**Unacceptable**
Residential, Hotel and Motels	50-60	60-75	75+
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds	50-65	65-80	80+
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches	50-60	60-75	75+
Office Buildings, Business Commercial, and Professional	50-70	70-80	80+
Auditoriums, Concert Halls, and Amphitheaters	N/A	50-75	75+
Industrial, Manufacturing, Utilities, and Agriculture	50-70	75+	N/A

Source: City of Palo Alto 2017

The Palo Alto Municipal Code (PAMC) regulates noise primarily through the Noise Ordinance, which comprises Chapter 9.10 of the Code, under Title 9, Public Peace, Morals and Safety. Section 9.10.060 of the PAMC restricts construction activities to the hours of 8 AM to 6 PM Monday through Friday and 9 AM to 6 PM on Saturday. Construction is prohibited on Sundays and holidays. Construction, demolition, or repair activities during construction hours must meet the following standards:

- No individual piece of equipment shall produce a noise level exceeding 110 dBA at a distance of 25 feet. If the device is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close to 25 feet from the equipment as possible.

- The noise level at any point outside of the property plane of the project shall not exceed 110 dBA.
- The holder of a valid construction permit for a construction project in a non-residential zone shall post a sign at all entrances to the construction site upon commencement of construction, for the purpose of informing all contractors and subcontractors, their employees, agents, materialmen, and all other persons at the construction site, of the basic requirements of this chapter.

The project operational impacts from traffic and stationary sources (e.g., HVAC equipment) noise would be significant if operation of the project results in the exposure of sensitive receptors to a perceptible increase in noise levels. Roughly a doubling of traffic volume would be necessary to generate a perceptible increase in roadway noise levels of 3 dBA or more.

Existing Ambient Noise Levels

The primary source of noise in the vicinity of the project site is motor vehicle traffic, including automobiles, trucks, buses, and motorcycles. Among area roadways, Sutter Avenue, Middlefield Road and Colorado Avenue produce noise from vehicles adjacent to the project site. Secondary sources of noise include garbage trucks and other delivery trucks, pedestrian activity and conversations.

To determine existing ambient noise levels on the project site, Rincon Consultants conducted a short-term noise measurement survey between 3:02 p.m. and 3:24 p.m. on September 18, 2023 and a long-term measurement was also conducted from September 18 through September 19, 2023 using a Piccolo II sound level meter fitted with a windscreen. The meter complies with American National Standards Institute (ANSI) Standard S1.4. The sound level meters were set to “slow” response and “A” weighting (dBA). The meters were calibrated prior to and after the monitoring period. All measurements were at least five feet above the ground and away from reflective surfaces. Measurements were taken at two locations (ST-1/LT-1 and ST-2) as shown in Figure 4. See Appendix B for noise monitoring data.

Short-term (ST)-1 is a monitor which logged noise data at 10-minute intervals near the northwestern border of the site behind the existing building from Sutter Avenue. ST-2 monitor was placed southeastern corner of the project site. Long-term (LT)-1 was placed at the same location as ST-1.

Figure 4 Approximate Noise Measurement Locations

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23-14767 EPS
Fig X Noise Measurement Locations

Table 6 shows short-term noise measurement survey results and Table 7 shows long-term noise measurement survey results.

Table 6 Short Term Noise Measurement Survey Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST 1	Midpoint of the northwest project boundary	3:02 – 3:12 p.m.	Approximately 150 feet to Sutter Avenue centerline	52	38	67
ST 2	Near the southeast project boundary	3:14 – 3:24 p.m.	Approximately 20 feet to Sutter Avenue centerline	55	44	68

dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{min} = minimum noise level, L_{max} = maximum noise level

Table 7 Long Term Noise Measurement Survey Results

Sample Time	dBA L_{eq}	Sample Time	dBA L_{eq}
24-hour Measurement – September 18-19, 2023			
3:00 p.m.	50	3:00 a.m.	36
4:00 p.m.	48	4:00 a.m.	38
5:00 p.m.	48	5:00 a.m.	46
6:00 p.m.	45	6:00 a.m.	50
7:00 p.m.	48	7:00 a.m.	50
8:00 p.m.	51	8:00 a.m.	49
9:00 p.m.	49	9:00 a.m.	46
10:00 p.m.	45	10:00 a.m.	44
11:00 p.m.	44	11:00 a.m.	50
12:00 a.m.	43	12:00 p.m.	49
1:00 a.m.	36	1:00 p.m.	50
2:00 a.m.	35	2:00 p.m.	53
24-hour Noise Level (Ldn)			**52**

dBA = A-weighted decibels; L_{eq} = equivalent noise level; Ldn = day-night average noise level

See Figure 4 for Approximate Noise Measurement Locations; see Appendix B for full measurement data.

Construction Noise

As discussed above, PAMC Section 9.10.060 regulates temporary construction noise. Construction of the project would generate temporary noise that would be audible at the single-family residence adjacent to the northeast/east of the project site. Noise associated with construction is a function of the type of construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the construction activities. Based on construction details provided by the applicant, it is estimated that the construction period would involve approximately 15 months from June 2024 until September 2025. While all phases of construction would generate noise, the site preparation and grading phases would typically generate the highest noise levels. According to applicant-provided information, pile drivers would not be used in building construction.

Construction noise was estimated using the Federal Highway Administration's Roadway Construction Noise Model (RCNM) (Appendix B). Noise was modeled based on the list of anticipated

equipment list for each phase of construction and the distances to nearby sensitive receivers. For a conservative approach, it was assumed that all construction equipment per phase would be operating simultaneously and would combine as a collective noise source. Table 8 shows the results of construction noise modeling measured at 25 feet from construction equipment to the closest property lines at the single-family residences to the northwest and multi-family to the north/northeast of the project site.

Table 8 Estimated Noise Levels during Project Construction

	L_{max} dBA		
Construction Phase	RCNM Reference Noise Level[1] 50 feet	Single-Family Residences to the Northwest 25 feet	Single-Family Residences to the Northeast 25 feet
Demolition	88	94	94
Site Preparation	91	97	97
Grading	91	97	97
Building Construction	91	97	97
Paving	86	92	92
Architectural Coating	84	90	90

[1] RCNM reference noise levels are noise levels generated during each construction phase measured from a point 50 feet from the location of the construction phase.

Source: Roadway Construction Noise Model (RCNM). See Appendix B for modeling outputs.

As shown in Table 8, construction noise could be as high as 97 dBA L_{max} during site preparation (estimated duration of 30 days), grading (estimated duration of 25 days) and building construction (estimated duration of 260 days). This peak measurement would be based on the maximum level at the property line. However, due to the dynamic nature of construction activity, equipment would not all operate at the same time or at a single location on the site. In addition, construction equipment would not be in constant use during the 8-hour operating day and noise levels would reduce where work is occurring at further distances from the property line. Construction noise levels would also be below the City's standard of 110 dBA L_{max} at any point outside the property line during allowable construction hours (PAMC Section 9.10.060). Therefore, impacts related to construction noise would be less than significant.

Construction Vibration

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as, vibratory compaction or excavation, are based on information contained in the 2018 Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*. Shown in Table 9, Based on FTA recommendations limiting vibration levels to below 0.2 inches per second peak particle velocity (in/sec PPV) at residential structures would prevent structural damage regardless of building construction type (FTA 2018).

Table 9 Groundborne Vibration Architectural 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

in/sec = inches per second; PPV = peak particle velocity

Source: FTA 2018

The project does not include any substantial vibration sources associated with operation. Therefore, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers, especially during grading and paving of the project site. According to the project applicant, impact pile driving is not proposed and vibratory rollers would not be used. Rubber-tired loaders would be used when within close distances to nearby buildings. Based on data from the FTA, use of a vibratory roller could exceed the significance threshold of 0.2 in/sec PPV if within 25 feet of residential buildings with plaster (FTA 2018). As discussed in the Project Description, the project applicant would use a static roller for paving activities. Vibration from a static roller would be up to approximately 0.05 in/sec PPV at 25 feet (McIver 2012), which would not exceed the 0.2 in/sec PPV threshold for potential architectural damage to nearby residential structures, and impacts would be less than significant.

Operational Noise

Stationary Sources

The primary on-site operational noise source from the project would be from HVAC units that are anticipated to be on the second floor balconies of the front units on Sutter Avenue and third floor balconies of the buildings at the rear of the project. For a conservative approach, this analysis assumes that HVAC units would operate at 100 percent of an hour for 24 hours. Based on review of various manufacturer specifications for residential applications, a representative noise level of 65 dBA L_{eq} at 3 feet for a 2.5-ton Carrier 24ABA4030 was selected for the analysis (see Appendix B for specification sheets). The nearest noise-sensitive receivers are single-family residences to the northwest, which would be located at least 15 feet from the nearest third floor, balcony-mounted HVAC equipment (note that this estimate is conservative in that the units are currently proposed to be approximately 18 feet from the property line). Additionally, there will be an approximately 3.5-foot wall with no gaps from the base of the balcony to the top of the wall and would block the line-of-sight to the nearest residences, providing at least 5 dBA of noise reduction. Because noise from HVAC equipment would attenuate at a rate of approximately 6 dBA per doubling of distance from the source, HVAC equipment would generate noise levels of up to 46 dBA L_{eq} at 15 feet at the nearest residential property lines. With the attenuation from the balcony wall and assuming that units could conservatively run 24 hours a day, this would equate to a Ldn of 53 dBA. Based on noise measurements taken at the project site, the existing ambient noise level is 52 dBA Ldn. Therefore, noise generated by HVAC equipment would not produce a noise level of 3 dBA or more above the existing ambient noise level of 52 dBA Ldn. In addition, the normally acceptable range of noise levels for residential uses is up to 60 dBA Ldn (Palo Alto 2017). Therefore, impacts would be less than significant.

In addition to mechanical equipment, the project would generate noise from people gathering on balconies. The main noise source associated with the use of the proposed balconies would be speech from conversations. Typically, a conversation between two people using a normal voice (not raised) at a distance of three feet is 60 dBA (Engineering ToolBox 2005). No amplified sound is proposed at any of the terraces, and speech from conversations would quickly dissipate and would not interfere with surrounding outdoor activities and noise-sensitive uses. Furthermore, per Assembly Bill 1307 (2023), the effect of noise generated by residential project occupants and their guests is not a significant effect on the environment. This impact would be less than significant.

Off-Site Traffic Noise

In addition, the proposed project would generate traffic noise from vehicles traveling to and from the project site. The proposed project would generate an estimated increase of 32 daily trips, 3 AM peak hour trips, and 3 PM peak hour trips (W-Trans 2023).

The project would not make substantial alterations to roadway alignments or substantially change the vehicle classifications mix on local roadways. Therefore, the primary factor affecting off-site noise levels would be increased traffic volumes. As shown in Table 10, using average daily traffic (ADT) counts from the City of Palo Alto Transportation Division (City of Palo Alto 2018) and the project trip generation provided by W-Trans, the increase in traffic noise levels would be less than 0.1 Ldn dBA along Middlefield Road, between Colorado Avenue and Loma Verde Avenue. A significant impact would occur if traffic noise increases the existing noise environment by 3 dBA or greater. Traffic noise impacts would be less than significant.

Table 10 Predicted Increases in Traffic Noise Levels

Roadway Segment	Average Daily Trips (ADT)		Noise Level Increase (dBA Ldn)	Significant Impact?
	Existing	Existing Plus Project		
Middlefield Road, Between Colorado Avenue and Loma Verde Avenue	14,003	14,035	<0.1	No

Source: W-Trans 2023, City of Palo Alto 2018.

Conclusion

Construction noise could generate noise levels of up to 97 dBA L_{max} at the nearest residential property line, which would not exceed the City's threshold of 110dBA L_{max}. In addition, construction would be limited to hours allowed by the City's Municipal Code. Impacts would be less than significant. Vibration from construction equipment would not exceed the FTA threshold of 0.2 PPV (in/sec) and would be less than significant. The project would introduce sources of operational noise to the site, including mechanical equipment (HVAC). Assuming that the units were to run for an entire 24-hour period, the closest single-family residential property line to the northwest would be exposed to a noise level of 53 dBA Ldn, which would not produce a noise level of 3 dBA or more above the existing ambient noise level of 52 Ldn and would not exceed the City's normally acceptable noise and land use compatibility standard of 60 Ldn for residential uses. Therefore, impacts would be less than significant.

Project traffic would increase traffic noise by less than 0.1 dBA Ldn over existing conditions along Middlefield Road, between Colorado Avenue and Loma Verde Avenue. Therefore, the project would not cause a traffic noise increase of 3 dBA or more. Therefore, off-site traffic noise impacts would be less than significant. The project would meet the requirements for Noise under *criterion (d)*.

C. *Air Quality*

A significant adverse air quality impact may occur when a project individually or cumulatively interferes with progress toward the attainment of the ozone standard by releasing emissions that equal or exceed the established long term quantitative thresholds for pollutants or causes an exceedance of a state or federal ambient air quality standard for any criteria pollutant. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants include reactive organic gases (ROG), nitric oxides (NO_x), carbon monoxide (CO), sulfur oxides (SO_X), and particulate matter (PM_{10} and $PM_{2.5}$). PM $_{10}$ is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. The project site is located within the San Francisco Bay Area Basin and falls under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has adopted guidelines for quantifying and determining the significance of air quality emissions in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2023). BAAQMD recommends that lead agencies determine appropriate air quality emissions thresholds of significance based on substantial evidence in the record. BAAQMD's significance thresholds in the updated guidelines are the most appropriate thresholds for use in determining air quality impacts of the project.

This air quality analysis conforms to the methodologies recommended by *BAAQMD's California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2023). Table 11 shows the significance thresholds that have been recommended by BAAQMD for project operations and construction in the San Francisco Bay Area Air Basin.

Table 11 Air Quality Thresholds of Significance

	Construction-Related Thresholds	Operation-Related Thresholds	
Pollutant/ Precursor	Average Daily Emissions (pounds per day)	Maximum Annual Emissions (tpy)	Average Daily Emissions (lbs/day)
ROG	54	10	54
NO_X	54	10	54
PM_{10}	82 (exhaust)	15	82
$PM_{2.5}$	54 (exhaust)	10	54

Notes: tpy = tons per year; lbs/day = pounds per day; NOX = oxides of nitrogen; PM2.5 = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM10 = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.
Source: BAAQMD 2022, Table 3-1

In addition, BAAQMD provides a preliminary screening methodology to conservatively determine whether a proposed project would exceed CO thresholds at the local level. If the following criteria are met, a project would result in a less than significant impact related to local CO concentrations:

1. Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
2. The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

3. The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

Methodology

Since the proposed project would involve demolition of the existing structure on the project site, none of the screening criteria would apply to this project. Air pollutant emissions generated by project construction and operation were thus estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1.1.14. CalEEMod uses project-specific information, including the project's land uses, square footages, and location to model a project's construction and operational emissions. The analysis reflects the construction and operation of the project as described under *Project Description*.

Construction Emissions

Construction emissions modeled for this analysis include emissions generated by construction equipment and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the proposed project was analyzed based on the applicant-provided construction schedule and default CalEEMod construction equipment list. Construction would occur over approximately 15 months. It is assumed that all construction equipment used would be diesel-powered. This analysis assumes that the project would comply with all applicable regulatory standards. In particular, the project would comply with BAAQMD Regulation 8 Rule 3 for architectural coatings and BAAQMD Regulation 6 Rule 3 for wood-burning devices. In addition, pursuant to Policy N-5.5 of the Palo Alto 2030 Comprehensive Plan (City of Palo Alto 2017), the project would also comply with the Basic Best Management Practices for Construction-Related Fugitive Dust Emissions (BAAQMD 2022):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel.
- Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Operational Emissions

Operational emissions modeled include mobile source emissions (i.e., vehicle emissions), energy emissions, and area source emissions. Mobile source emissions are generated by vehicle trips to and from the project site, and trip generation rates from the Local Transportation Analysis from W-Trans were used (Appendix A). Emissions attributed to energy use include natural gas consumption by appliances as well as for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products and architectural coatings.

Construction Emissions

Project construction would involve demolition, site preparation, grading, building construction, paving, and architectural coating activities that have the potential to generate air pollutant emissions. Table 12 summarizes the estimated maximum daily emissions of ROG, NO_X, CO, PM_{10} exhaust, $PM_{2.5}$ exhaust, and sulfur oxide (SO_x) during project construction. As shown in the table, project construction emissions for criteria pollutants would be below the BAAQMD average daily thresholds of significance, and therefore impacts would be less than significant.

Table 12 Project Construction Average Daily Emissions

	Emissions (lbs/day)					
Year	**ROG**	**NO_X**	**CO**	**PM_{10} (exhaust)**	**$PM_{2.5}$ (exhaust)**	**SO_X**
Maximum Daily Emissions	1	11	11	1	<1	<1
BAAQMD Thresholds (average daily emissions)	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	N/A	No	No	N/A

See Appendix C for AQ CalEEMod worksheets; emission data presented is the highest of winter or summer outputs

N/A = not applicable; lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; CO = Carbon Monoxide; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_x = oxides of sulfur.

No BAAQMD threshold for CO or SO_X

Operational Emissions

Operational emissions are those associated with the general use of the project after construction.

Table 13 summarizes the project's net operational daily emissions and compares them to BAAQMD thresholds. As shown in Table 13, project operational emissions for all criteria pollutants would be below the BAAQMD average daily thresholds of significance and therefore would be less than significant.

Table 13 Estimated Operational Daily Emissions

Sources	Estimated Emissions (lbs/day)					
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Proposed Project						
Mobile	<1	<1	2	1	<1	<1
Area	<1	<1	1	<1	<1	<1
Energy	0	0	0	0	0	0
Existing Uses to be Removed						
Mobile	<1	<1	2	<1	<1	<1
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Total Net Daily Operational Emissions (Proposed Project minus Existing Uses to be Removed)	<1	<1	**1**	<1	<1	<1
BAAQMD Average Daily Thresholds	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	No	No	No	No

See Appendix C for AQ CalEEMod worksheets; emission data presented is the highest of winter or summer outputs

N/A = not applicable; lbs/day = pounds per day; ROG = reactive organic gases; NO_X = oxides of nitrogen; CO = Carbon Monoxide; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO_x = oxides of sulfur.

No BAAQMD threshold for CO or SO_X

Project Consistency with the 2017 Clean Air Plan

The California Clean Air Act requires that air districts create a Clean Air Plan that describes how the jurisdiction will meet air quality standards. The most recently adopted air quality plan is the 2017 Plan. The 2017 Plan focuses on two paramount goals, both consistent with the mission of BAAQMD:

- Protect air quality and health at the regional and local scale by attaining all national and state air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project:

- Supports the primary goals of the air quality plan
- Includes applicable control measures from the air quality plan
- Does not disrupt or hinder implementation of any air quality plan control measures

A project that would not support the 2017 Plan's goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support with the 2017 Plan's goals. The project would not result in exceedances of BAAQMD thresholds for criteria air pollutants and thus would not conflict with the 2017 Plan's goal to attain air quality standards.

The 2017 Plan includes goals and measures to promote building decarbonization, conservation of water, use of on-site renewable energy, and energy efficiency. The project would be supplied electricity by City of Palo Alto Power, which has provided 100% carbon neutral power since 2013. The project would comply with any applicable California Green Building Standards, including but not limited to, providing an all-electric building, installation of energy-efficient equipment and lighting, and incorporation of EV charging requirements for multi-family residences. Therefore, the project would not conflict with or obstruct the implementation of an applicable air quality plan, and impacts would be less than significant impact.

CO Emissions

According to BAAQMD, a project would have less than significant CO impacts if project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour. There are no intersections in the project vicinity with volumes of more than 44,000 vehicles per hour. Additionally, the San Francisco Bay Area Air Basin has been designated attainment for both federal and State standards for CO since 1998 (BAAQMD 2017). As discussed in the Traffic section, the project would only produce a net increase of three new peak hour trips and would not result in a significant CO impact. Impacts related to CO emissions would be less than significant.

Toxic Air Contaminants

Certain population groups such as children, the elderly, and people with health issues are particularly sensitive to air pollution. The majority of sensitive receptor locations are schools, residences and hospitals. The closest sensitive receptors to the project site are the adjacent single-family residences along the northern, southern and western edges of the project site. The following subsections discuss the project's potential to result in impacts related to TAC emissions during construction and operation.

Construction

Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998 (CARB 2021).

Generation of DPM from construction projects typically occurs in a single area for a short period. Demolition and construction of the proposed project would occur over approximately fifteen months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed demolition and construction activities (i.e., 15 months) is approximately four percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary

and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (BAAQMD 2022).

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during demolition, site preparation, and grading activities. For the purposes of this analysis, these activities were assumed to occur over 80 days. PM emissions would decrease for the remaining construction period because construction activities such as building construction and paving would require less intensive construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than one percent of the total 30-year exposure period for health risk calculation. Given the aforementioned discussion, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual.

In addition, pursuant to Policy N-5.5 of the Palo Alto 2030 Comprehensive Plan the project would incorporate BAAQMD *Basic Construction Mitigation Measures* during construction on the project site to reduce dust emissions. Therefore, project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Operation

Sources of operational TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities. The project does not include construction of new gas stations, dry cleaners, highways, roadways, or other sources that could be considered new permitted or non-permitted sources of TAC or $PM_{2.5}$ in proximity to sensitive receptors. In addition, mobile emissions generated from the project would be minimal and spread over a broad geographical area. Therefore, project operation would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Asbestos

Demolition would be subject to BAAQMD Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition and the associated disturbance of asbestos-containing waste material generated or handled during these activities. This rule requires notification of BAAQMD of any regulated demolition activity, and contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Impacts related to asbestos emissions from projects that comply with Regulation 11, Rule 2 are considered to be less than significant since the regulation would ensure the proper and safe disposal of asbestos containing material.

Lead

The proposed project would be required to comply with BAAQMD Regulation 11, Rule 1 (Lead), which is intended to control the emission of lead into the atmosphere. In addition, the proposed project would also be required to comply with the California Code of Regulations, Section 1532.1, which requires testing, monitoring, containment, and disposal of lead-based materials, such that

exposure levels do not exceed California Occupational Safety and Health Administration (CalOSHA) standards. Odors

BAAQMD's 2022 CEQA Air Quality Guidelines identifies land uses that have the potential to generate substantial odor complaints. The uses in the table include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants (BAAQMD 2022). 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.

The project does not involve, nor would locate, new sensitive receptors in proximity to odor-emitting uses as identified in BAAQMD's 2022 CEQA Air Quality Guidelines. The proposed uses would not generate objectionable odors that would affect a substantial number of people. Furthermore, the project would be subject to BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. Therefore, the project would not substantially cause new sources of odors and would not significantly expose sensitive receptors to existing or new odors, and impacts would be less than significant.

Conclusion

The proposed project would not generate significant air quality impacts or require analysis for CO hotspots or TACs based on BAAQMD criteria. Therefore, the project would meet the requirements for Air Quality under *criterion (d)*.

D. Water Quality

The project site is currently developed with an 8-unit apartment building and does not contain ponds, a creek, or other surface water. The closest watercourse is the channelized Matadero Canal approximately 470 feet south of the project site. Construction of the proposed project would not alter the course of a stream or river.

The project site is connected to an existing stormwater drainage system managed and maintained by the city of Palo Alto. Currently the project site is almost entirely covered in impervious paving. The project would replace the impervious surface with new imperious paving, landscaping, and new buildings. The center aisle of the project site would be underlain with permeable grass pavers. Total impervious surface on site under the proposed project would be 12,750 square feet.

Pursuant to PAMC Chapter 16.11, the project is considered a "significant redevelopment project" because it would result in the replacement of 10,000 square feet or more of impervious surface. Significant redevelopment projects must treat, either through capture, flow-through filtration, or a combination of capture and flow-through filtration, the volume of stormwater specified in the PAMC. The project would include a 515 square-foot stormwater bioretention area along the project site fronting Sutter Avenue. The bioretention area would capture and filter runoff before entering the storm drain system, thereby removing pollutants and reducing the rate and volume of stormwater flow. The proposed square footage of bioretention area would exceed City of Palo Alto requirements. Therefore, the proposed project would not substantially increase runoff from the site.

Stormwater leaving the project site would enter the City's existing stormwater conveyance system via storm drains on site. Impervious surface that would result from the construction of the proposed project would not create or contribute runoff that would exceed the capacity of the existing

stormwater conveyance infrastructure or otherwise result in flooding on or near the project site. In addition, the project would adhere to all Bay Area Municipal Regional Stormwater Permit requirements and comply with specifications regarding installation and maintenance for C.3 features as described in the Santa Clara Valley Urban Runoff Pollution Prevention Program C.3 Handbook.

Because the project would not increase stormwater runoff and would comply with City requirements to control and filter runoff, development of the proposed project would not degrade the quality of stormwater runoff from the site. Impacts related to water quality would be less than significant.

Conclusion

The proposed project would not introduce new surface water discharges, would not increase runoff volumes, result in substantial erosion or siltation, or result in flooding on- or off-site. Additionally, the project would not substantially alter the existing drainage pattern of the site. Therefore, the project would meet the requirements for Hydrology and Water Quality under *criterion (d)*.

3.5 Criterion (e)

The site can be adequately served by all required utilities and public services.

The project site is in an existing urban area served by existing public utilities and services. The proposed project is relatively small with 12 units and would not result in a substantial increase in demand for services or utilities. The City of Palo Alto Power and City of Palo Alto Waste-Gas-Water provides electricity, water, sewer, and solid waste collection services (through GreenWaste of Palo Alto) to the existing units as well as neighboring residences and commercials buildings. The existing infrastructure would continue to provide these services to the proposed project. In accordance with the City's newly adopted all-electric requirements, the new buildings will be all electric and no gas service will be provided to site.

Conclusion

The proposed project involves infill development on a project site in an urban area that is already served by existing utilities and public services. As discussed under *criterion (a)*, the project is within the allowed density for the site and is consistent with the 2030 Comprehensive Plan land use designation for the site. The project would not change the site's use or increase the intensity of use such that existing utility and public service providers would not be able to serve the project site. Therefore, the project would meet the requirements for Utilities and Service Systems under *criterion e*.

4 Exceptions to the Exemption

CEQA Guidelines Section 15300.2 outlines exceptions to the applicability of a Categorical Exemption, including cumulative impacts, significant effects due to unusual circumstances, scenic highways, hazardous waste sites, and historical resources. These exceptions are discussed below. As shown, none of the exceptions would apply.

4.1 Cumulative Impacts Criterion

CEQA Guidelines Section 15300.2 states that "all exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant." Table 14 includes a list of relevant cumulative projects within a 500-foot-radius of the project site.

Table 14 Cumulative Projects List

Project Location	Land Use	Size	Status	Distance to Project Site
702 Clara Drive	Residential	Three two-story residential units	Under review	300 feet
2938 Ross Road	Residential	Two-story single-family residence with attached one-car garage	Review complete	0.2 miles
3054 Price Court	Residential	Two-story, 2,457 square foot residence with 580 square foot accessory dwelling unit	Review complete	0.4 miles

sf = square feet

Source: City of Palo Alto 2023. Cumulative project details were sourced from building eye, a citizen-facing mapping interface provided by the City of Palo Alto and available online at https://paloalto.buildingeye.com/planning and verified with City planning staff.

As discussed in Section 3.3, Criterion (C) above, the project would not affect sensitive biological resources and therefore would not result in a cumulative impact related to biological resources. As discussed in Section 3.4, Criterion (D), subsections A and C above, VMT and air quality analyses already take into account cumulative impacts and these impacts were found to be less than significant. As discussed in Section 3.4, Criterion (D), subsection D and Section 3.5, Criterion (E), the proposed project would not contribute pollutants such that water quality would be impacted and would be served by available utilities and public services. Therefore, impacts related to these issue areas were found to be less than significant and the project would not result in a cumulatively considerable contribution to potential significant cumulative impacts.

The project would involve temporary noise and vibration during construction; however, these effects are localized and would cease upon cessation of construction activities. Additionally, noise levels would not exceed the City's threshold for construction noise. Construction noise impacts may overlap for the proposed project and the projects listed above. However, construction noise impacts are temporary. Overall, the project would not result in significant cumulative impacts. The proposed project would result in an increase in operational noise by approximately <0.1 dBA, therefore the project would not result in a cumulatively considerable contribution to significant operational noise impacts. This exception does not apply to the proposed project.

4.2 Significant Effects due to Unusual Circumstances Criterion

State CEQA Guidelines Section 15300.2 states that "a categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." As discussed under *Project Location and Setting* above, the project site is currently developed with an 8-unit residential building. The project site is generally flat and does not possess characteristics which would qualify as unusual circumstances under Section State CEQA Guidelines Section 15300.2. Therefore, no known circumstances at the project site or related to project operations would result in a reasonable possibility of significant effects to the environment. This exception would not apply to the project.

4.3 Scenic Highways Criterion

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway." There are no designated State Scenic Highways in the vicinity of the project site. The closest scenic highway is I-280, which has been recognized as eligible for designation as a State Scenic Highway, located approximately 3.4 miles southwest of the project site (Caltrans 2018). Due to distance and intervening structures, the project site is not visible from 1-280. Therefore, the project would not damage scenic resources within a highway officially designated as a state scenic highway. This exception would not apply to the project.

4.4 Hazardous Waste Sites Criterion

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code." A search of the EnviroStor environmental database, the California Department of Toxic Substances Control Hazardous Waste and Substances Sites (Cortese) List, and the State Water Resources Control Board's (SWRCB) Geotracker Database was conducted in August 2023. The records review indicated that this project is not located on a site included on any list compiled pursuant to Section 65962.5 of the Government Code (Department of Toxic Substances Control 2023, State Water Resources Control Board 2023). Therefore, this exception does not apply to the project.

4.5 Historic Resources Criterion

State CEQA Guidelines Section 15300.2 states that a categorical exemption "shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource." According to the Historical Resources Assessment (HRA) prepared by Rincon Consultants, Inc. in September 2023 (Appendix D), the existing structure on the site was constructed in 1954 and is recommended ineligible for listing in the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR) or local Historic Resources Inventory (HRI) under any eligibility criteria. Rincon Consultants, Inc. conducted a search of the files at the California Historical

Resources Information System (CHRIS) - Northwest Information Center (NWIC) in September 2023.[2] The records search included a review of previous cultural resources studies and recorded cultural resources within a 0.5-mile buffer of the project site. Additionally, Rincon Consultants, Inc. completed a pedestrian survey of the site.

Based on the evaluation, there were four resources found in proximity to the project site. However, no cultural resources as defined by CEQA Guidelines Section 15064.5(a), or unique archaeological resources, as defined by Public Resources Code Section 21083.2(g), were found to exist within the project site. In accordance with the Historic Resources & Permit Review Requirements of the City of Palo Alto, the structure is therefore not considered a historical resource for the purposes of CEQA and demolition would not result in the substantial adverse change in the significance of a historical resource. Therefore, this exception does not apply to the project.

As concluded in the HRA (Appendix D), the property at 739 Sutter Avenue is recommended ineligible for listing in the NRHP or CRHR or for local listing. As such, the property does not qualify as a historical resource and its demolition would not result in a significant adverse impact as defined by Section 15064.5 of the CEQA Guidelines. Further, the CHRIS records search failed to identify other cultural resources, including historic districts, within proximity to the project site. Finally, Rincon Consultants did not identify any information to suggest that the project area may be sensitive for archaeological resources. Based on the findings of this investigation, there would be no impact on historic resources associated with the proposed project.

Although the project would not result in a substantial adverse change in the significance of a historical resource, the applicant has proposed to follow standard best management practices in the unanticipated event that a buried archeological resource is uncovered during construction which are reinforced in the City's standard conditions of approval for development projects. Specifically, the applicant has proposed that if a potential archeological resource is uncovered during construction all work within 100 feet of the discovery would cease until the discovery is evaluated by a Qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology. If the find is determined to be an archeological resource, the Qualified Archeologist would recommend appropriate treatment, such as avoidance and preservation in place or creation of an Archaeological Resources Data Recovery and Treatment Plan, depending on the nature of the discovery. If the discovery is Native American in nature, coordination with the appropriate Native American tribe, based on the nature of the discovery, would occur.

[2] The records search results are not included in this report because public access to information on the location of archaeological sites is restricted by laws including Section 6254.10 of the California State Government Code, Executive Order 13007, Section 304 of the National Historic Preservation Act, and Section 9(a) of the Archaeological Resources Protection Act.

5 Summary

Based on the analysis in this report, the proposed 739 Sutter Avenue Project meets all criteria for a Class 32 Categorical Exemption pursuant to Section 15332 of the State CEQA Guidelines. Further, none of the exceptions to the Categorical Exemption listed in CEQA Guidelines Section 15300.2 apply to the proposed project.

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Appendix A

Local Transportation Analysis

October 23, 2023

Ms. Nichole Yee
Rincon Consultants, Inc.
449 15th Street, Suite 150
Oakland, California 94612

Local Transportation Analysis for 739 Sutter Avenue

Dear Ms. Yee;

As requested, W-Trans has prepared a Local Transportation Analysis for the proposed residential development to be located at 739 Sutter Avenue in the City of Palo Alto. The purpose of this letter is to document the project's potential to influence local transportation operations. Consistent with Senate Bill (SB) 743, the project's transportation impacts were analyzed using Vehicle Miles Traveled (VMT). According to the City of Palo Alto's Local Transportation Analysis policy, a Level of Service operational analysis is not required since this project would generate fewer than 20 net-new a.m. or p.m. peak hour trips. Similarly, a detailed operational analysis is not required per the policies outlined in the Santa Clara Valley Transportation Agency's *Transportation Impact Analysis Guidelines* since fewer than 100 new a.m. or p.m. peak hour trips would be generated by the project.

Project Description

The project site is located at 739 Sutter Avenue in the City of Palo Alto and the project includes the construction of two three-story buildings with a total of 12 townhome dwelling units. The site is currently occupied by eight rental dwelling units which would be demolished to make way for the proposed project. A total of 24 parking spaces would be provided comprised of two covered spaces at each dwelling unit. Storage for bicycles would be provided via 12 ceiling-mounted long-term indoor bicycle parking spaces and two outdoor short-term spaces.

Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021, based on the "Single-Family Attached Housing" (Land Use #215); rates for "Multifamily Housing (Low Rise)" (Land Use #220) were used to estimate the trips associated with the existing use to be eliminated.

As shown in Table 1, the proposed project is expected to generate an average of 86 trips per day, including six trips during the a.m. peak hour and seven trips during the p.m. peak hour. After deductions are taken for trips associated with the existing rental dwelling units, the project would be expected to generate 32 new trips on a daily basis, including three during the morning peak hour and three during the evening peak hour; these new trips represent the increase in traffic associated with the project. The project is not anticipated to generate any internal capture trips, pass-by trip credits or any other trip reductions.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
	(du)	Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Existing											
Multifamily Housing (Low Rise)	-8	6.74	-54	0.40	-3	-1	-2	0.51	-4	-3	-1
Proposed											
Single Family Attached Housing	12	7.20	86	0.48	6	2	4	0.57	7	4	3
TOTAL			**32**		**3**	**1**	**2**		**3**	**1**	**2**

Note: du = dwelling unit

Alternative Modes

Pedestrian Facilities

Given the proximity of the site to surrounding residential and retail uses, as well as the California Avenue Caltrain Station and multiple local bus routes, it is reasonable to assume that some residents would choose to walk to destinations near the site and use the existing sidewalk network. Immediately surrounding the California Avenue Caltrain Station are approximately 100 acres of Pedestrian Transit-Oriented Development Zoning. Sidewalk connectivity is continuous throughout the surrounding neighborhood. The proposed project would include the demolition and replacement of the sidewalks along the project frontage on Sutter Avenue. The proposed sidewalk would be 5.5 feet wide.

Project Summary – Internal pedestrian access within the proposed development site would be provided via a network of 3- to 5-foot-wide paved pedestrian pathways. All pedestrian facilities would need to be built to satisfy current City of Palo Alto Public Works Department standards.

Finding – Pedestrian facilities serving the project site and surrounding area are adequate. New facilities that would be provided on-site would connect to the existing system.

Bicycle Network

The *City of Palo Alto Bicycle & Pedestrian Transportation Plan*, 2012, classifies bikeways into four categories:

- **Class I Bikeways/Multi-Use Paths** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bikeways** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bikeways** – signing only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Bicycle Boulevards** – Bicycle boulevards are signed, shared roadways with especially low motor vehicle volumes such that motorists passing bicyclists can use the full width of the roadway. Bicycle boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding, and other measures.

In the immediate project area, a Class II bikeway exists north of Middlefield Road on Colorado Avenue (eastbound direction only). Colorado Avenue is classified as a Class III bikeway in both directions south of Middlefield Road and westbound only north of Middlefield Road. The Bryant Street Bicycle Boulevard is located 0.6 miles away from the project site and a Class I Multi-Use Path is accessible between Cowper Street and Middlefield Road along Hoover Park. Proposed in the City's 2012 *Bicycle & Pedestrian Transportation Plan*, Moreno Boulevard and Ross Road

are now fully functional bicycle boulevards, spanning over 2 miles altogether. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 2 summarizes the bicycle facilities which currently exist in the project vicinity, as described in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan*, 2012.

Table 2 – Bicycle Facility Summary

Status ***Facility***	Type	Length (miles)	Begin Point	End Point
Existing				
Hoover Park	I	0.4	Middlefield Rd	Cowper St
Colorado Ave (EB Only)	II	0.4	Louis Rd	Middlefield Rd
Colorado Ave (WB Only)	III	0.4	Louis Rd	Middlefield Rd
Colorado Ave	III	0.2	Middlefield Rd	Cowper St
Moreno Blvd	Bicycle Blvd	0.4	Louis Rd	Middlefield Rd
Ross Rd	Bicycle Blvd	1.7	Oregon Expy	Louis Rd
Proposed				
Matadero Creek	I	1.5	Alma St	Bayshore Rd
Middlefield Rd	II	0.5	Moreno Ave	Loma Verde Ave

Source: *City of Palo Alto Bicycle & Pedestrian Transportation Plan*, Alta Planning & Design, 2012, *Google Maps,* 2023

Existing bicycle facilities together with shared use of minor streets provide adequate access for bicyclists within the vicinity of the project site. Bicycle use will be further supported through the provision of 12 additional long-term bike parking spaces and one additional short-term bike parking spaces as part of the project.

Finding – Existing and planned bicycle facilities serving the project site are adequate.

Transit Facilities

Development sites which are located within a half-mile (2,640-foot) walk of a transit stop are generally considered to be adequately served by transit.

Santa Clara Valley Transportation Authority (VTA)

The Santa Clara Valley Transportation Authority (VTA) provides fixed route bus service and light-rail train service in Santa Clara County. Two bicycles can be carried on most VTA buses. Bike rack space is on a first-come, first-served basis. Additional bicycles are allowed on VTA buses at the discretion of the driver.

Within a half-mile walk of the project site there are bus stops for Routes 21, School 288, School 288L, and School 288M. The combined service areas of these routes provide access between the project site and a variety of destinations such as the Palo Alto Transit Center, Sunnyvale Transit Center, Mountain View Transit Center, Stanford Shopping Center, Santa Clara Transit Center, Henry M. Gunn High School, and Palo Alto VA Medical Center. Bus service for Route 21 is available weekdays from 5:30 a.m. to 10:00 p.m. and weekends from 8:30 a.m. to 7:00 p.m., at 30- to 60-minute headways. School Routes 288, 288L and 288M are available every day that Henry M. Gunn High School is in session, aligning with its daily schedule.

Dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. VTA Paratransit is designed to serve the needs of individuals with disabilities within Palo Alto and Santa Clara County.

Caltrain

Caltrain is the commuter rail line serving the San Francisco Peninsula. It connects Palo Alto with San Francisco to the north and San Jose and Gilroy to the south. The California Avenue Caltrain Station is located at 101 California Avenue which is approximately 1.2 miles from the project site. Both bicycle racks and lockers are provided at the train station. Bicycle racks are available on a first-come, first-served basis, while lockers must be reserved. Weekday train service is provided at this station with both northbound and southbound trains on approximately 30-minute to one-hour headways from roughly 5:00 a.m. to 11:40 p.m.

On-Demand Transportation Services

On-demand private vehicle services (e.g., taxi, Uber, Lyft, etc.) are available in Palo Alto 24 hours a day. These vehicles can be used for trips both locally and to farther destinations.

Project Summary – If 20 percent of peak hour trips were made by transit, there would be one additional transit rider during each peak hour. The single rider expected to be generated by the project would therefore be unlikely to exceed the carrying capacity of the existing transit services near the project site.

Significance Finding – The proposed project would not conflict with any plans or policies related to pedestrian, bicycle and transit facilities or travel and these modes would be adequately served by existing facilities and routes. The project's impact on such modes would therefore be less than significant.

Vehicle Miles Traveled (VMT) Analysis

Guidance provided by both the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018, and the City of Palo Alto VMT Transportation Analysis Methodology Under CEQA (Dated June 15, 2020), were used. These documents recommend the use of screening thresholds to quickly identify when a project can be expected to result in a less-than-significant impact without conducting a detailed study. (See CEQA Guidelines, 15036(c)(3)(C), 15128, and Appendix G.) The Palo Alto VMT Criteria indicates that residential projects located in areas where the baseline VMT is 15 or more percent below the existing county average per resident could be considered to be in low-VMT areas and therefore presumed to have a less than significant VMT impact.

According to the Santa Clara Countywide VMT Evaluation Tool (Version 2), the countywide VMT per capita is 13.33 miles. Based on the Palo Alto VMT Criteria, a project generating a VMT that is 15 percent or more below this value, or 11.33 miles per capita or less, would have a less-than-significant VMT impact. The evaluation tool estimates that this project would have a VMT rate of 8.09 miles per capita. Because this per capita VMT rate is below the significance threshold of 11.33 miles, the project would be considered to have a less-than-significant VMT impact. A summary of the VMT findings is provided in Table 3. A copy of the Santa Clara Countywide Evaluation Tool screening results output is enclosed.

Table 3 – Vehicle Miles Traveled Analysis Summary

VMT Metric	Baseline VMT Rate	Significance Threshold	Project VMT Rate	Resulting Significance
Household VMT per Capita (Countywide Baseline)	13.33	11.33	8.09	Less-Than-Significant

Note: VMT Rate is measured in VMT/Capita, or the number of daily miles driven per resident

Significance Finding – The project would be expected to have a less-than-significant transportation impact on vehicle miles traveled.

Site Circulation and Access

Vehicular Site Access

The proposed project would include the continued use of the existing driveway with access to/from Sutter Avenue. This full access driveway is shared with the adjacent residential property to the west as shown in the enclosed site plan.

Sight Distance

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting to enter the street and the driver of an approaching vehicle. Sight distances along Sutter Avenue at the project driveway were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. There is no recommended sight distance for urban driveways; however, stopping sight distance was applied to estimate adequacy for safe operation using the approach travel speed as the basis for determining the recommended sight distance. Based on the posted speed limit of 25 mph the minimum stopping sight distance required is 150 feet. However, a portion of Sutter Avenue just south of the project site is within 500 feet of Key Elementary School. Due to this, the project area is subject to section 10.56 of the Palo Alto Municipal Code, which requires that a 20-mph speed limit be imposed while school is in session. Although this roadway segment along Sutter Avenue is affected by the ordinance for special speed zones, a 25-mph design speed was used to maintain a conservative analysis of the project site.

A review in the field shows that sight distances at the proposed project driveway on Sutter Avenue each exceed 150 feet so are adequate. To maintain this sight distance, it is suggested that any vegetation near the project's driveways should be trimmed in accordance with the Federal Highway Administration's guide on *Vegetation Control for Safety*, 2008, which states that any vegetation near the project's driveways should be trimmed to an appropriate height of three feet or less and trees should be trimmed so that nothing hangs below a height of seven feet from the surface of the roadway. This provides a gap in vegetation for drivers to observe oncoming traffic and safely maneuver from a driveway. Additionally, it is recommended that on-street parking be restricted for 20 feet on either side of the project driveway on Sutter Avenue, which is consistent with guidance from the American Association of State Highway and Transportation Officials' *A Policy on Geometric Design of Highways and Streets* and the National Association of City Transportation Officials' *Urban Street Design*.

For a motorist traveling eastbound on Sutter Avenue intending to turn left into the proposed project driveway, the stopping sight distance looking west along Sutter Avenue is also greater than 150 feet, providing adequate visibility to allow a following driver to observe and react to a vehicle that may stop in the roadway before making a left turn into the driveway.

Finding – Adequate sight distance is available at the existing project driveway location to accommodate all turns entering and exiting the site.

Recommendations – To achieve a minimum sight distance of 150 feet at the driveway access point, it is recommended that on-street parking be restricted for 20 feet on either side of the driveway. Also, it is recommended that planned or existing vegetation along the project frontage on Sutter Avenue be trimmed and maintained to ensure continued adequate visibility.

Significance Finding – With implementation of a landscaping management program, the proposed project would have a less-than-significant impact on safety as it would not introduce any new hazards.

Emergency Vehicle Access

The project's driveway and internal parking lot circulation network would need to be designed to meet current City standards and so can be expected to accommodate the access requirements for passenger vehicles. Vehicle access would be provided via 20- to 24-foot-wide drive aisles. These aisles would have sufficient width to

accommodate two-way traffic operations for circulating vehicles, as well as parking maneuvers to/from covered (garage) parking spaces.

All buildings are accessible by fire apparatus since each exterior wall is within 150 feet of Sutter Avenue thereby satisfying the conditions specified by the *California Fire Code (CFC), Section 503.1.1* which states *"Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility."* Building access by aerial ladder is not possible due to the existing overhead lines adjacent to the project site. Instead, each building is accessible by ground-based ladders and fire hoses attached to fire apparatus parked on Sutter Avenue.

It is noted that the Palo Alto Fire Department has sole responsibility for determining the suitability of the project site for adequate fire apparatus vehicle access.

Since all roadway users must yield the right-of-way to emergency vehicles when using their sirens and lights, the added project-generated traffic would not impact access or response times for emergency vehicles.

Significance Finding – The project would result in a less-than-significant impact regarding adequacy of emergency response since emergency vehicles are able to access the site from the public street and all roadway users must yield to emergency vehicles when using their lights and sirens.

Parking Facilities

The project was analyzed to determine whether the proposed parking supply would be sufficient to satisfy City Code requirements. The project site as proposed would provide a total of 24 parking spaces comprised of two covered spaces at each dwelling unit.

The City of Palo Alto parking supply requirements stipulate that 24 spaces are required for this project. This requirement is based on the *City of Palo Alto Municipal Code, Chapter 18.52.040; Off-Street Parking, Loading and Bicycle Facility* which states that for dwelling units with two or more bedrooms that two spaces are required for each unit at multi-family residential developments and at least one space per unit must be covered.

The proposed parking supply of 24 spaces is equal to the number of required spaces by the City Code.

Finding – The number of parking spaces provided by the project would satisfy the City's parking Code requirement.

Bicycle Storage

The *Palo Alto Municipal Code (Chapter 18.52.040 – Off-Street Parking, Loading and Bicycle Facility Requirements*) states that one bicycle space shall be provided for every unit for multi-family residential developments. Thus, the City Code requires a minimum of 12 bicycle parking spaces to be provided at the project site. The proposed project would provide 14 bicycle parking spaces comprised of 12 long-term spaces in garages and two outdoor short-term spaces.

Finding – The proposed supply of 13 bicycle parking spaces is more than the required amount of 12.

Conclusions and Recommendations

- The proposed project would generate an average of 86 daily trips, including six trips during the a.m. peak hour and seven trips during the p.m. peak hour. This represents an increase of 32 trips each day, with three during the a.m. peak hour and three during the p.m. peak hour when compared to present conditions.

- Pedestrian, bicycle, and transit facilities would be adequate to serve the project as proposed based on the comprehensive network of pedestrian, bicycle and transit facilities that exist within the study area. The project would not conflict with any plans or policies for these modes, resulting in a less-than-significant impact.

- The proposed project would have a less-than-significant transportation impact on vehicle miles traveled.

- Adequate sight lines are available at the proposed project driveway locations. To maintain adequate sight lines, vegetation along the project frontage on Sutter Avenue should be trimmed and maintained to ensure that all landscaping lies below three feet in height or above seven feet. With a maintenance program implemented the project would not introduce any hazards and its impact would be less than significant.

- Emergency access and circulation would function acceptably, and traffic from the proposed development would be expected to have a less-than-significant impact on emergency response times.

- The proposed parking supply of 24 spaces is equal to the minimum City requirement.

- The 14 proposed bicycle parking spaces would be more than enough to meet the City's requirement for bicycle storage facilities.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Kenneth Jeong, PE
Senior Traffic Engineer

Mark Spencer, PE
Senior Principal

MES/kbj/PAL026.L1

Enclosure: VMT Output Report, Site Plan

Project Details

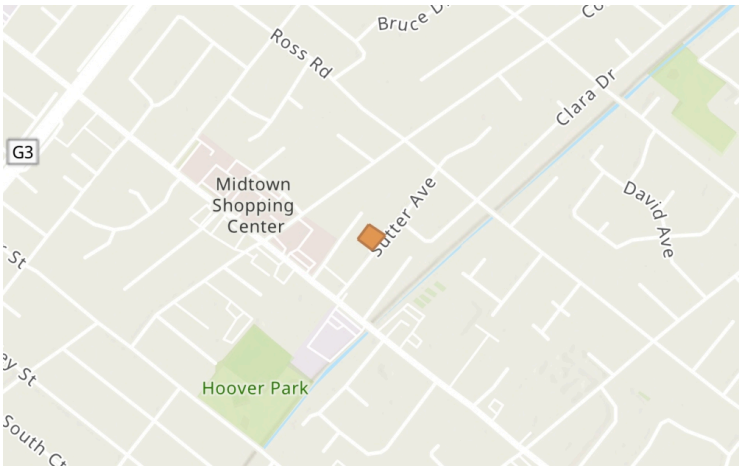
Timestamp of Analysis	July 24, 2023, 12:09:00 PM
Project Name	739 Sutter Avenue - Residential
Project Description	The project site is located at 739 Sutter Avenue in the City of Palo Alto and the project includes the construction of two three-story buildings with a total of 12 townhome dwelling units. The site is currently occupied by eight rental dwelling units

Project Location Map

Jurisdiction:

Palo Alto

APN	TAZ
12735200	488



Analysis Details

Data Version	VTA Countywide Model December 2019
Analysis Methodology	TAZ
Baseline Year	2023

Project Land Use

Residential:

Single Family DU:	
Multifamily DU:	12
Total DUs:	12

Non-Residential:

Office KSF:	
Local Serving Retail KSF:	
Industrial KSF:	

Residential Affordability (percent of all units):

Extremely Low Income:	0 %
Very Low Income:	0 %
Low Income:	0 %

Parking:

Motor Vehicle Parking:	24
Bicycle Parking:	

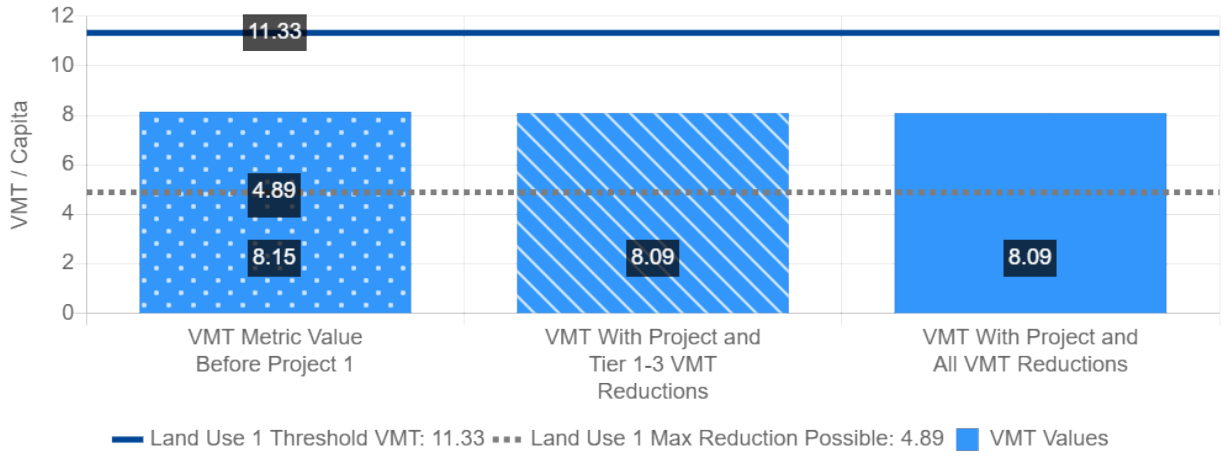
Proximity to Transit Screening

Inside a transit priority area? No (Fail)

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Metric 1:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
VMT Threshold Description 1 / Threshold Value 1:	-15% / 11.33
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	8.15	8.09	8.09
Low VMT Screening Analysis	Yes (Pass)	Yes (Pass)	Yes (Pass)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	8.82
With Project Residential Density:	8.98

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.31
With Project Residential Diversity Index:	0.3

PC03 Affordable Housing

PC04 Increase Employment Density

Existing Employment Density:	45.97
With Project Employment Density:	45.97

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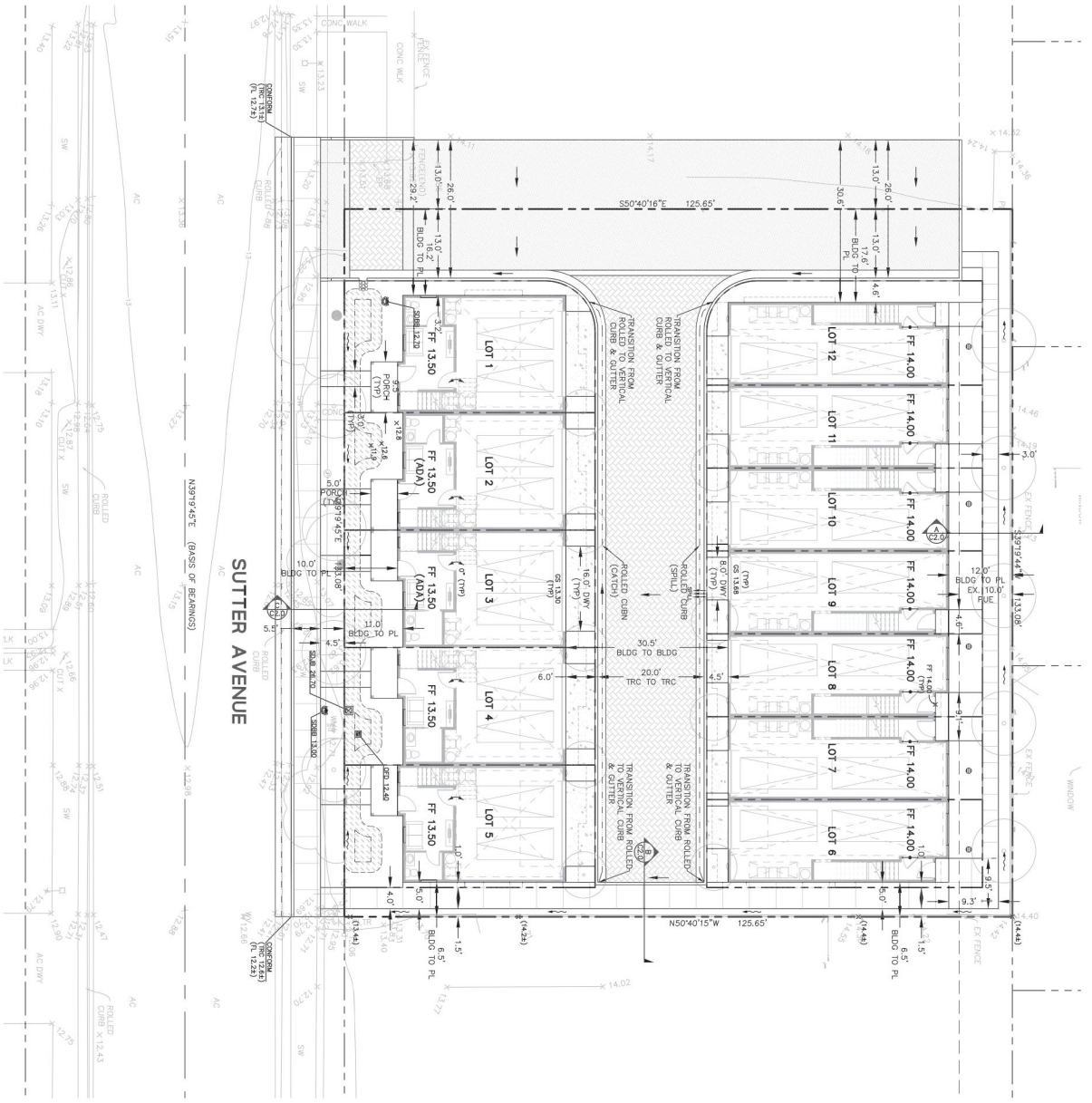
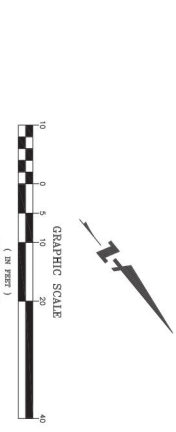
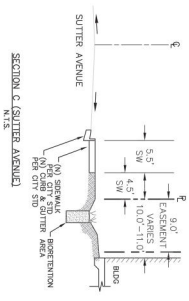
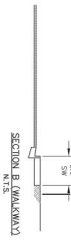
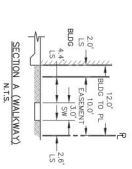
PLOT DATE: 04-29-22 PLOTTED BY: hoan

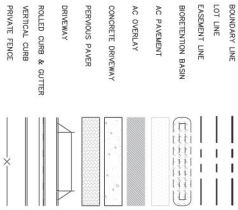












Drawing Number: C2.0	Date 4/29/22	No.	Revisions
2 OF 5	Scale AS SHOWN		
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	Drawn JH		
	Approved PK		
	Job No20220187		

RESIDENTIAL DEVELOPMENT
739 SUTTER AVENUE
PRELIMINARY SITE AND GRADING PLAN WITH CROSS SECTIONS

PALO ALTO SANTA CLARA CALIFORNIA

BKF ENGINEERS
200 4th STREET
SUITE 300
SANTA ROSA, CA 95401
(707) 583-8500
www.bkf.com

Appendix B

Supporting Noise Data

Attachment 1

Construction Noise and Vibration Calculations

Construction Noise

Phase 1	Noise Level @ 50 ft	Single Family Res to the NW	Single Family Res to the NE
Distance		25	25
Demolition	88	94.021	94.021
Site Preparation	91	97.021	97.021
Grading	91	97.021	97.021
Building Construction	91	97.021	97.021
Paving	86	92.021	92.021
Architectural Coating	84	90.021	90.021

Construction Vibration

MTSJ-02	Vibration @ 25 ft	Single Family Res to the NW	Single Family Res to the NE
Phase 1		20	20
Large Bulldozer	0.089	0.124	0.124
Loaded Trucks	0.076	0.106	0.106
Static Roller	0.05	0.070	0.070
Small Bulldozer	0.003	0.004	0.004

MTSJ-02	Vibration @ 25 ft	Single Family Res to the NW	Single Family Res to the NE
Phase 2		26	26
Vibratory Roller	0.21	0.198	0.198

Attachment 2

Operational HVAC Ldn Calculations

Operational HVAC Ldn Calculations

Residences Northwest of HVAC															
Day	Date	Time	Duration	Leq	Energy	Leq (hr)	Energy+Penalty	CNEL			Energy+Penalty		Ldn		
											____	All	53		
												X	#REF!		
								24-Hr CNEL	53			XX	#REF!		
												XXX	53		
												XXXX	53		
												XXXXX	46		
												XXXXXX	#DIV/0!		
												XXXXXXX	#DIV/0!		
								Min =>	46						
								Max =>	46						
Monday	2022-09-18	10:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				*5 dBA reduction from wall added in
Monday	2022-09-18	11:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	12:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	13:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	14:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	15:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	16:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	17:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	18:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Monday	2022-09-18	19:00:00	01:00:00.0	46.0	39810.72	46	125892.5412				39810.7171				
Monday	2022-09-18	20:00:00	01:00:00.0	46.0	39810.72	46	125892.5412				39810.7171				
Monday	2022-09-18	21:00:00	01:00:00.0	46.0	39810.72	46	125892.5412				39810.7171				
Monday	2022-09-18	22:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Monday	2022-09-18	23:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	00:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	01:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	02:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	03:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	04:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	05:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	06:00:00	01:00:00.0	46.0	39810.72	46	398107.1706				398107.171				
Tuesday	2022-09-19	07:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Tuesday	2022-09-19	08:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				
Tuesday	2022-09-19	09:00:00	01:00:00.0	46.0	39810.72	46	39810.71706				39810.7171				

Attachment 3

Noise Monitoring Data

Long Term Noise Monitoring Data

Project:	23-14767 739 Sutter Ave, Palo Alto														CNEL			Energy+Penalty	Ldn	
Day	Date	Time	Duration	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(99)	Energy	Leq (hr)	Energy+Penalty						
															All	52			All	52
															Monday				X	#REF!
															Tuesday				XX	#REF!
															Wednesday				XXX	44
															XXXX				XXXX	43
															XXXXX				XXXXX	53
															XXXXXX				XXXXXX	#DIV/0!
															XXXXXXX				XXXXXXX	#DIV/0!
															Min =>	0				
															Max =>	53				
Monday	9/18/2023	15:00:00	01:00:00.0	50.3	66.8	38	60.4	54.7	47.6	43		107151.9	50.3	107151.9305				107151.931		
Monday	9/18/2023	16:00:00	01:00:00.0	47.8	70.7	36	57.3	49.7	42.3	39.6		60255.96	47.8	60255.95861				60255.9586		
Monday	9/18/2023	17:00:00	01:00:00.0	47.9	64.5	35.7	56.9	52.7	46.8	41.9		61659.5	47.9	61659.50019				61659.5002		
Monday	9/18/2023	18:00:00	01:00:00.0	45.1	65	35.5	54.1	49	41.7	39.3		32359.37	45.1	32359.36569				32359.3657		
Monday	9/18/2023	19:00:00	01:00:00.0	48.2	65	37.8	58.9	51.6	44.3	41.8		66069.34	48.2	208929.6131				66069.3448		
Monday	9/18/2023	20:00:00	01:00:00.0	51.4	76	37.1	59.3	53.1	45	42.4		138038.4	51.4	436515.8322				138038.426		
Monday	9/18/2023	21:00:00	01:00:00.0	48.8	72.3	38.4	58.3	53.6	45.6	42		75857.76	48.8	239883.2919				75857.7575		
Monday	9/18/2023	22:00:00	01:00:00.0	45.3	63.1	38.1	55.8	47.4	41.6	40.3		33884.42	45.3	338844.1561				338844.156		
Monday	9/18/2023	23:00:00	01:00:00.0	44.1	60.1	34.2	54.1	48.1	39.3	37.6		25703.96	44.1	257039.5783				257039.578		
Tuesday	9/19/2023	00:00:00	01:00:00.0	42.5	63.8	34	49.1	42.7	37.1	36.2		17782.79	42.5	177827.941				177827.941		
Tuesday	9/19/2023	01:00:00	01:00:00.0	36.4	57.2	34	39.4	37.3	36.5	35.8		4365.158	36.4	43651.58322				43651.5832		
Tuesday	9/19/2023	02:00:00	01:00:00.0	34.9	42.7	33.4	37.6	36	35	34.4		3090.295	34.9	30902.95433				30902.9543		
Tuesday	9/19/2023	03:00:00	01:00:00.0	36.3	58.8	33.7	41	37.1	35.9	35.1		4265.795	36.3	42657.95188				42657.9519		
Tuesday	9/19/2023	04:00:00	01:00:00.0	37.5	55.2	33.7	43.6	37.5	36.2	35.7		5623.413	37.5	56234.13252				56234.1325		
Tuesday	9/19/2023	05:00:00	01:00:00.0	45.6	67.8	35.2	56.9	45.6	40.6	39.5		36307.81	45.6	363078.0548				363078.055		
Tuesday	9/19/2023	06:00:00	01:00:00.0	49.7	67	38.5	59.5	53.6	47.5	43.9		93325.43	49.7	933254.3008				933254.301		
Tuesday	9/19/2023	07:00:00	01:00:00.0	49.7	65.6	40.6	59.2	53.1	47.8	44.9		93325.43	49.7	93325.43008				93325.4301		
Tuesday	9/19/2023	08:00:00	01:00:00.0	48.6	63.8	33.1	58.2	53.5	47.8	41.7		72443.6	48.6	72443.59601				72443.596		
Tuesday	9/19/2023	09:00:00	01:00:00.0	46.3	63.4	32.4	55.8	51	43.5	37.3		42657.95	46.3	42657.95188				42657.9519		
Tuesday	9/19/2023	10:00:00	01:00:00.0	44	62.8	33	53.4	46.8	41.1	37.6		25118.86	44	25118.86432				25118.8643		
Tuesday	9/19/2023	11:00:00	01:00:00.0	49.8	67.7	34.4	59.4	54.2	47.9	42.3		95499.26	49.8	95499.2586				95499.2586		
Tuesday	9/19/2023	12:00:00	01:00:00.0	48.5	70.2	34.6	58.4	51.9	43.5	38.6		70794.58	48.5	70794.57844				70794.5784		
Tuesday	9/19/2023	13:00:00	01:00:00.0	49.8	70.5	34.4	60.8	49.2	41.8	38.2		95499.26	49.8	95499.2586				95499.2586		
Tuesday	9/19/2023	14:00:00	01:00:00.0	52.7	79.1	37	60.7	51.9	46.2	42.2		186208.7	52.7	186208.7137				186208.714		

Attachment 4

Roadway Construction Noise Model (RCNM)

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Demolition

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Demolition	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	25.0	0.0
Backhoe	No	40		77.6	25.0	0.0
Dozer	No	40		81.7	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	87.7	83.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	87.7	86.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Site Preparation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Site Preparation	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		25.0	0.0
Backhoe	No	40		77.6	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment		Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader		91.0	87.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe		83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Total	91.0	87.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading	Residential	65.0	55.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		25.0	0.0
Dozer	No	40		81.7	25.0	0.0
Backhoe	No	40		77.6	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	91.0	87.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	87.7	83.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	91.0	89.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Building Construction	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		25.0	0.0
Backhoe	No	40		77.6	25.0	0.0
Backhoe	No	40		77.6	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	91.0	87.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	91.0	88.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80.0	25.0	0.0
Paver	No	50		77.2	25.0	0.0
Backhoe	No	40		77.6	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Roller	86.0	79.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	83.2	80.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Backhoe	83.6	79.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	86.0	84.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 09/27/2023
Case Description: Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Architectural Coating	Residential	65.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	25.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)	Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	83.7	79.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.7	79.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
		0.0	0.0	0.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	0.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)		-4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	0.0	-4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 5

Carrier 2.5-Ton 24ABA4030 HVAC unit

Carrier

Turn to the experts

COOL YOUR HOME WITH A CARRIER AIR CONDITIONER

Carrier offers real choices for efficient and reliable home comfort

Designed To Fit Your Home – And Your Budget

Turn to the experts at Carrier for real solutions for your home cooling needs. Our comprehensive selection of air conditioners have been designed to fit virtually any home and a variety of budgets. From our innovative and intelligent Infinity® System line with variable-speed, two-stage, and single-stage options...to Performance™ Series deluxe two-stage and single-stage choices...and the value-driven Comfort™ Series single-stage models, our air conditioners offer summertime comfort you can depend on.

Air Conditioner Options+	Infinity® System					
	24VNA6	24VNA9	24ANB1	24ANB7	24ANB7**C (Coastal)	24ANB6
Efficiency						
Cooling SEER (up to)	26.0	19.0		17.0		16.0
Compressor Type	Fully variable-speed with capacity range from 25-100%	Five-stage variable-speed with capacity range from 25-100%	Two-stage with high-stage at 100% capacity and low-stage at 75% capacity			Single-stage at 100% capacity at all times
ENERGY STAR®	•	•	•	•	•	•
Comfort Features						
Sound level (as low as)	51 dBA	60 dBA	71 dBA	72 dBA	72 dBA	66 dBA
Humidity Control	Ideal Humidity System™ Technology offers excellent humidity control and is capable of removing up to 400% more moisture than standard systems.**		Enhanced			Standard
Durability						
Cabinet Protection	WeatherArmor™ Ultra provides durability with a galvanized steel cabinet, louvered coil guard and baked-on powder paint to protect against dings, dents and weather-based threats.					
Recommended Thermostat						
Infinity® System Control	•	•	•	•	•	•
ecobee, Powered by Carrier	-	-	-	-	-	-
Peace of Mind						
Limited Parts Warranty*	10-Year					
Replacement Limited Warranty*	10-Year	-	-	-	-	-

* Upon timely registration, the warranty period is five years if not registered within 90 days of installation except in jurisdictions where warranty benefits cannot be conditioned upon registration.

\+ Air conditioner models may not be sold in every region.

** Based on Carrier testing, all data was run with the systems cycling once they met the assumed home load. The assumed load at AHAM conditions (80/70, 80) is the capacity of the variable-speed running continuously in dehumidification mode. The difficult conditions load was determined by a Wrightsoft® load calculation for a home in Florida at 69 OD 72/63 ID. This condition was provided by a customer in Florida as “worst case”.

Designed with Your Comfort in Mind

Carrier air conditioners represent years of design, development and testing with one goal in mind – maximizing your family’s comfort. Along the way, we have created new technologies that deliver the outstanding quality and energy efficiency you demand while staying ahead of industry trends and global initiatives. Check out the side-by-side comparison below to see which model is right for you.

Performance™ Series				Comfort™ Series				
24ACB7	24APB6	24ACC6	24ACB3	24ABC6	24AAA5	24ACC4	24ACA4**C (Coastal)	24ABB3
Efficiency								
17.0		16.5	13.0	16.5	17.0	14.0		13.0
Two-stage with high-stage at 100% capacity and low-stage at 75% capacity	Single-stage at 100% capacity at all times			Single-stage at 100% capacity at all times				
•	•	•	-	•	-	-	-	-
Comfort Features								
72 dBA	68 dBA	73 dBA	70 dBA	76 dBA	75 dBA	75 dBA	73 dBA	73 dBA
Enhanced	Standard			Standard				
Durability								
WeatherArmor Ultra				WeatherArmor provides durability with a galvanized steel cabinet, wire coil guard and baked-on powder paint to protect against dings, dents and weather-based threats.				
Recommended Thermostat								
-	-	-	-	-	-	-	-	-
•	•	•	•	•	•	•	•	•
Peace of Mind								
10-Year				10-Year				
-	-	-	-	-	-	-	-	-

MORE THAN A CENTURY OF COOL

In 1902, a determined engineer answered one of mankind's most nagging questions: How do we make hot, sticky, indoor air go away? In creating the world's first modern air conditioning system, Willis Carrier forever changed indoor life, and, more than a century later, the corporation that bears his name takes inspiration from his example.

Carrier strives to improve on our founder's breakthroughs, introducing new technologies that make life at home even cooler. Today, a nationwide network of experts continues to advance Willis Carrier's lifework. Your expert Carrier dealer is equipped to evaluate your home and create a customized system designed around your lifestyle.

Carrier

Turn to the experts

carrier.com 1-800-CARRIER

01-824-119-01
07/2021

Appendix C

Air Quality Monitoring Results

739 Sutter Ave-Proposed Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	739 Sutter Ave-Proposed
Construction Start Date	6/1/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.20
Precipitation (days)	18.8
Location	739 Sutter Ave, Palo Alto, CA 94303, USA
County	Santa Clara
City	Palo Alto
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1728
EDFZ	1
Electric Utility	City of Palo Alto
Gas Utility	City of Palo Alto Ultilities
App Version	2022.1.1.21

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

Single Family Housing	12.0	Dwelling Unit	0.38	8,294	1,689	—	36.0	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads

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.	1.44	1.27	11.4	11.1	0.02	0.53	5.37	5.91	0.49	2.58	3.07	—	1,779	1,779	0.07	0.03	0.69	1,786
Mit.	1.44	1.27	11.4	11.1	0.02	0.53	2.13	2.67	0.49	1.02	1.51	—	1,779	1,779	0.07	0.03	0.69	1,786
% Reduced	—	—	—	—	—	—	60%	55%	—	61%	51%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.79	1.24	6.08	8.28	0.01	0.26	0.05	0.30	0.24	0.01	0.25	—	1,514	1,514	0.06	0.02	0.01	1,521
Mit.	0.79	1.24	6.08	8.28	0.01	0.26	0.05	0.30	0.24	0.01	0.25	—	1,514	1,514	0.06	0.02	0.01	1,521
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.44	0.66	3.34	4.54	0.01	0.14	0.45	0.57	0.13	0.19	0.30	—	821	821	0.03	0.01	0.08	825
Mit.	0.44	0.66	3.34	4.54	0.01	0.14	0.20	0.32	0.13	0.08	0.19	—	821	821	0.03	0.01	0.08	825
% Reduced	—	—	—	—	—	—	56%	44%	—	58%	36%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.08	0.12	0.61	0.83	< 0.005	0.02	0.08	0.10	0.02	0.03	0.06	—	136	136	0.01	< 0.005	0.01	137
Mit.	0.08	0.12	0.61	0.83	< 0.005	0.02	0.04	0.06	0.02	0.01	0.04	—	136	136	0.01	< 0.005	0.01	137
% Reduced	—	—	—	—	—	—	56%	44%	—	58%	36%	—	—	—	—	—	—	—

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	1.44	1.21	11.4	11.1	0.02	0.53	5.37	5.91	0.49	2.58	3.07	—	1,779	1,779	0.07	0.03	0.69	1,786
2025	0.83	1.27	6.08	8.31	0.01	0.25	0.15	0.37	0.23	0.04	0.24	—	1,517	1,517	0.06	0.02	0.62	1,525
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	0.58	5.66	7.16	0.01	0.26	0.04	0.30	0.24	0.01	0.25	—	1,375	1,375	0.06	0.02	0.01	1,381
2025	0.79	1.24	6.08	8.28	0.01	0.25	0.05	0.30	0.23	0.01	0.24	—	1,514	1,514	0.06	0.02	0.01	1,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.34	0.29	2.73	3.22	0.01	0.13	0.45	0.57	0.12	0.19	0.30	—	570	570	0.02	0.01	0.06	573
2025	0.44	0.66	3.34	4.54	0.01	0.14	0.04	0.17	0.13	0.01	0.13	—	821	821	0.03	0.01	0.08	825
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.50	0.59	< 0.005	0.02	0.08	0.10	0.02	0.03	0.06	—	94.4	94.4	< 0.005	< 0.005	0.01	94.9

2025	0.08	0.12	0.61	0.83	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	136	136	0.01	< 0.005	0.01	137

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	1.44	1.21	11.4	11.1	0.02	0.53	2.13	2.67	0.49	1.02	1.51	—	1,779	1,779	0.07	0.03	0.69	1,786
2025	0.83	1.27	6.08	8.31	0.01	0.25	0.15	0.37	0.23	0.04	0.24	—	1,517	1,517	0.06	0.02	0.62	1,525
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.69	0.58	5.66	7.16	0.01	0.26	0.04	0.30	0.24	0.01	0.25	—	1,375	1,375	0.06	0.02	0.01	1,381
2025	0.79	1.24	6.08	8.28	0.01	0.25	0.05	0.30	0.23	0.01	0.24	—	1,514	1,514	0.06	0.02	0.01	1,521
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.34	0.29	2.73	3.22	0.01	0.13	0.20	0.32	0.12	0.08	0.19	—	570	570	0.02	0.01	0.06	573
2025	0.44	0.66	3.34	4.54	0.01	0.14	0.04	0.17	0.13	0.01	0.13	—	821	821	0.03	0.01	0.08	825
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.50	0.59	< 0.005	0.02	0.04	0.06	0.02	0.01	0.04	—	94.4	94.4	< 0.005	< 0.005	0.01	94.9
2025	0.08	0.12	0.61	0.83	< 0.005	0.02	0.01	0.03	0.02	< 0.005	0.02	—	136	136	0.01	< 0.005	0.01	137

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.	0.38	0.56	0.22	3.02	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	554	560	0.53	0.02	2.22	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.30	0.48	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	519	525	0.54	0.03	0.12	546
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.33	0.51	0.24	2.46	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	6.00	525	531	0.53	0.03	0.99	552
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.09	0.04	0.45	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	0.99	86.8	87.8	0.09	< 0.005	0.16	91.4

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	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Area	0.06	0.27	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.38	0.56	0.22	3.02	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	554	560	0.53	0.02	2.22	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527

Area	0.00	0.21	0.00	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	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.30	0.48	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	519	525	0.54	0.03	0.12	546
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.27	0.23	2.13	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	—	524	524	0.03	0.02	0.93	532
Area	0.03	0.24	< 0.005	0.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.90	0.90	< 0.005	< 0.005	—	0.90
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.33	0.51	0.24	2.46	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	6.00	525	531	0.53	0.03	0.99	552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1
Area	0.01	0.04	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27
Waste	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.06	0.09	0.04	0.45	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	0.99	86.8	87.8	0.09	< 0.005	0.16	91.4

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	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Area	0.06	0.27	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.38	0.56	0.22	3.02	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	554	560	0.53	0.02	2.22	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527
Area	0.00	0.21	0.00	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	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.30	0.48	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	6.00	519	525	0.54	0.03	0.12	546
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.30	0.27	0.23	2.13	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	—	524	524	0.03	0.02	0.93	532
Area	0.03	0.24	< 0.005	0.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.90	0.90	< 0.005	< 0.005	—	0.90
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Waste	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	0.33	0.51	0.24	2.46	0.01	< 0.005	0.49	0.50	< 0.005	0.13	0.13	6.00	525	531	0.53	0.03	0.99	552

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1
Area	0.01	0.04	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27
Waste	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	0.06	0.09	0.04	0.45	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	0.99	86.8	87.8	0.09	< 0.005	0.16	91.4

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.18	0.18	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.03	0.32	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.4	58.4	< 0.005	< 0.005	—	58.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—	9.70
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.44	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	87.4	87.4	< 0.005	< 0.005	0.37	88.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.32	157
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	5.61	5.61	< 0.005	< 0.005	0.01	5.69
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
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	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.77

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	0.51	4.69	5.79	0.01	0.19	—	0.19	0.17	—	0.17	—	852	852	0.03	0.01	—	855
Demolition	—	—	—	—	—	—	0.18	0.18	—	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	58.4	58.4	< 0.005	< 0.005	—	58.6
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—	9.70
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.44	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	87.4	87.4	< 0.005	< 0.005	0.37	88.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	< 0.005	0.19	0.09	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.32	157
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	5.61	5.61	< 0.005	< 0.005	0.01	5.69
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.93	0.93	< 0.005	< 0.005	< 0.005	0.94
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	—	1.69	1.69	< 0.005	< 0.005	< 0.005	1.77

3.3. Site Preparation (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861

Dust From Material Movement	—	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.46	< 0.005	0.02	—	0.02	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Dust From Material Movement	—	—	—	—	—	—	0.04	0.04	—	< 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	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.7	43.7	< 0.005	< 0.005	0.19	44.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.36	3.36	< 0.005	< 0.005	0.01	3.41
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
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. Site Preparation (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.46	< 0.005	0.02	—	0.02	0.02	—	0.02	—	70.5	70.5	< 0.005	< 0.005	—	70.8
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 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	0.01	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Dust From Material Movement	—	—	—	—	—	—	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.7	43.7	< 0.005	< 0.005	0.19	44.4
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.36	3.36	< 0.005	< 0.005	0.01	3.41
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.57
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. 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	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	5.31	5.31	—	2.57	2.57	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.78	0.73	< 0.005	0.04	—	0.04	0.03	—	0.03	—	117	117	< 0.005	< 0.005	—	118
Dust From Material Movement	—	—	—	—	—	—	0.36	0.36	—	0.18	0.18	—	—	—	—	—	—	—

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	0.01	0.14	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.4	19.4	< 0.005	< 0.005	—	19.5
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	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	0.03	0.03	0.02	0.33	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.6	65.6	< 0.005	< 0.005	0.28	66.6
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.27
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	0.00	0.00	0.00	0.00	0.00	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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.71
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

3.6. 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	1.41	1.19	11.4	10.7	0.02	0.53	—	0.53	0.49	—	0.49	—	1,713	1,713	0.07	0.01	—	1,719
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.78	0.73	< 0.005	0.04	—	0.04	0.03	—	0.03	—	117	117	< 0.005	< 0.005	—	118
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.07	0.07	—	—	—	—	—	—	—
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	0.02	0.01	0.14	0.13	< 0.005	0.01	—	0.01	0.01	—	0.01	—	19.4	19.4	< 0.005	< 0.005	—	19.5

Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.33	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	65.6	65.6	< 0.005	< 0.005	0.28	66.6
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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.20	4.20	< 0.005	< 0.005	0.01	4.27
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	0.00	0.00	0.00	0.00	0.00	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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.70	0.70	< 0.005	< 0.005	< 0.005	0.71
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

3.7. Building Construction (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.15	0.12	1.22	1.52	< 0.005	0.06	—	0.06	0.05	—	0.05	—	285	285	0.01	< 0.005	—	286
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	0.03	0.02	0.22	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.2	47.2	< 0.005	< 0.005	—	47.3
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	0.02	0.02	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.8	37.8	< 0.005	< 0.005	0.16	38.4
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	0.01	0.09	36.9
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	0.02	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.0	35.0	< 0.005	< 0.005	< 0.005	35.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	0.01	< 0.005	36.8
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.72	7.72	< 0.005	< 0.005	0.02	7.84
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.68	7.68	< 0.005	< 0.005	0.01	8.04
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	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.33
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 (2024) - Mitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.67	0.56	5.60	6.98	0.01	0.26	—	0.26	0.23	—	0.23	—	1,305	1,305	0.05	0.01	—	1,309
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	0.15	0.12	1.22	1.52	< 0.005	0.06	—	0.06	0.05	—	0.05	—	285	285	0.01	< 0.005	—	286
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	0.03	0.02	0.22	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	47.2	47.2	< 0.005	< 0.005	—	47.3
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	0.02	0.02	0.01	0.19	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.8	37.8	< 0.005	< 0.005	0.16	38.4
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	0.01	0.09	36.9
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	0.02	0.01	0.01	0.16	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.0	35.0	< 0.005	< 0.005	< 0.005	35.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	35.2	35.2	< 0.005	0.01	< 0.005	36.8
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.72	7.72	< 0.005	< 0.005	0.02	7.84
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.68	7.68	< 0.005	< 0.005	0.01	8.04

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	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.30
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.27	1.27	< 0.005	< 0.005	< 0.005	1.33
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. 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	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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	0.31	0.26	2.53	3.42	0.01	0.11	—	0.11	0.10	—	0.10	—	643	643	0.03	0.01	—	646
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	0.06	0.05	0.46	0.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	107	107	< 0.005	< 0.005	—	107
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	0.02	0.01	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.0	37.0	< 0.005	< 0.005	0.15	37.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	< 0.005	0.09	36.2
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	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.3	34.3	< 0.005	< 0.005	< 0.005	34.8
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	< 0.005	< 0.005	36.2
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	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.03	17.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02	17.8
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	—	2.83	2.83	< 0.005	< 0.005	0.01	2.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005	2.95
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. 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	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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	0.62	0.52	5.14	6.94	0.01	0.22	—	0.22	0.20	—	0.20	—	1,305	1,305	0.05	0.01	—	1,309
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	0.31	0.26	2.53	3.42	0.01	0.11	—	0.11	0.10	—	0.10	—	643	643	0.03	0.01	—	646
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	0.06	0.05	0.46	0.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	107	107	< 0.005	< 0.005	—	107
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	0.02	0.01	0.01	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.0	37.0	< 0.005	< 0.005	0.15	37.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	< 0.005	0.09	36.2
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	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.3	34.3	< 0.005	< 0.005	< 0.005	34.8
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.6	34.6	< 0.005	< 0.005	< 0.005	36.2
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	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.03	17.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.02	17.8
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	—	2.83	2.83	< 0.005	< 0.005	0.01	2.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.83	2.83	< 0.005	< 0.005	< 0.005	2.95
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. 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	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.5	10.5	< 0.005	< 0.005	—	10.5
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.04	0.72	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	150	150	< 0.005	0.01	0.59	152
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
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	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
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. 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	0.61	0.51	4.37	5.31	0.01	0.19	—	0.19	0.18	—	0.18	—	823	823	0.03	0.01	—	826
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.34	0.41	< 0.005	0.01	—	0.01	0.01	—	0.01	—	63.2	63.2	< 0.005	< 0.005	—	63.4
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.5	10.5	< 0.005	< 0.005	—	10.5
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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	0.06	0.04	0.72	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	150	150	< 0.005	0.01	0.59	152
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
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	—	1.78	1.78	< 0.005	< 0.005	< 0.005	1.81
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

3.13. 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	—	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.06	0.44	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.2	66.2	< 0.005	< 0.005	—	66.4
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.40	7.40	< 0.005	< 0.005	0.03	7.52
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.86	6.86	< 0.005	< 0.005	< 0.005	6.95
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.44	3.44	< 0.005	< 0.005	0.01	3.49
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
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

3.14. 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	—	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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 Coatings	—	0.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.06	0.44	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.2	66.2	< 0.005	< 0.005	—	66.4
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.0
Architectural Coatings	—	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.40	7.40	< 0.005	< 0.005	0.03	7.52
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	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.86	6.86	< 0.005	< 0.005	< 0.005	6.95
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	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.44	3.44	< 0.005	< 0.005	0.01	3.49
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.58
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Total	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527
Total	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1
Total	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Total	0.31	0.29	0.21	2.34	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	552	552	0.02	0.02	2.16	561
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527
Total	0.30	0.28	0.25	2.20	0.01	< 0.005	0.50	0.50	< 0.005	0.13	0.13	—	519	519	0.03	0.02	0.06	527
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1
Total	0.05	0.05	0.04	0.39	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.02	—	86.7	86.7	< 0.005	< 0.005	0.15	88.1

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	0.00	0.00	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

4.3.1. 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	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.83
Total	0.06	0.27	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83

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	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.21	0.00	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	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.01	0.04	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15

4.3.2. 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	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	0.06	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.82	1.82	< 0.005	< 0.005	—	1.83
Total	0.06	0.27	0.01	0.68	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	1.82	1.82	< 0.005	< 0.005	—	1.83
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	—	0.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.21	0.00	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	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.01	0.01	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	—	0.15
Total	0.01	0.04	< 0.005	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	0.15	0.15	< 0.005	< 0.005	—	0.15

4.4. Water Emissions by Land Use

4.4.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27
Total	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27

4.4.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Total	—	—	—	—	—	—	—	—	—	—	—	0.93	0.00	0.93	< 0.005	< 0.005	—	1.62
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27
Total	—	—	—	—	—	—	—	—	—	—	—	0.15	0.00	0.15	< 0.005	< 0.005	—	0.27

4.5. Waste Emissions by Land Use

4.5.1. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Total	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Total	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93
Total	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93

4.5.2. 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Total	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Total	—	—	—	—	—	—	—	—	—	—	—	5.07	0.00	5.07	0.51	0.00	—	17.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93
Total	—	—	—	—	—	—	—	—	—	—	—	0.84	0.00	0.84	0.08	0.00	—	2.93

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.06	0.06
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Single Family Housing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

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)

Equipme 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	6/1/2024	6/29/2024	6.00	25.0	—
Site Preparation	Site Preparation	7/1/2024	8/3/2024	6.00	30.0	—
Grading	Grading	8/31/2024	9/28/2024	6.00	25.0	—
Building Construction	Building Construction	9/30/2024	7/29/2025	6.00	260	—
Paving	Paving	7/31/2025	9/1/2025	6.00	28.0	—
Architectural Coating	Architectural Coating	2/3/2025	9/1/2025	6.00	181	—

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	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	1.00	367	0.40
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	6.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	7.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
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	10.0	11.7	LDA,LDT1,LDT2

Demolition	Vendor	0.00	8.40	HHDT,MHDT
Demolition	Hauling	2.04	20.0	HHDT
Demolition	Onsite truck	0.00	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	0.00	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2
Grading	Vendor	0.00	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	0.00	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.32	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	1.28	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	11.7	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.86	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT

Architectural Coating	Onsite truck	0.00	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	0.00	8.40	HHDT,MHDT
Demolition	Hauling	2.04	20.0	HHDT
Demolition	Onsite truck	0.00	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	0.00	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	0.00	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	11.7	LDA,LDT1,LDT2
Grading	Vendor	0.00	8.40	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	0.00	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	4.32	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	1.28	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	0.00	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	11.7	LDA,LDT1,LDT2
Paving	Vendor	0.00	8.40	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	0.00	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.86	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	0.00	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	0.00	—	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	16,795	5,598	0.00	0.00	—

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	4,400	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	—	18.8	0.00	—
Paving	0.00	0.00	0.00	0.00	0.29

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.29	0%

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	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00

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
Single Family Housing	86.4	86.4	86.4	31,536	710	710	710	259,038

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	86.4	86.4	86.4	31,536	710	710	710	259,038

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	12
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)
Single Family Housing	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	12
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)
16795.35	5,598	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

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)
Single Family Housing	236,774	0.00	0.0000	0.0000	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)
Single Family Housing	236,774	0.00	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	435,197	22,069

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Single Family Housing	435,197	22,069

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	9.40	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	9.40	—

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
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0

Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

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)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	12.4	annual days of extreme heat
Extreme Precipitation	6.40	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	19.7
AQ-DPM	67.3
Drinking Water	38.1
Lead Risk Housing	49.4
Pesticides	0.00
Toxic Releases	25.6
Traffic	85.2
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	36.8
Haz Waste Facilities/Generators	63.6
Impaired Water Bodies	33.2
Solid Waste	0.00
Sensitive Population	—
Asthma	42.1
Cardio-vascular	11.0
Low Birth Weights	18.4
Socioeconomic Factor Indicators	—
Education	9.73
Housing	12.3
Linguistic	44.4
Poverty	1.98

Unemployment	15.8

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	96.72783267
Employed	67.86860003
Median HI	98.54998075
Education	—
Bachelor's or higher	97.767227
High school enrollment	100
Preschool enrollment	87.2321314
Transportation	—
Auto Access	82.44578468
Active commuting	75.02887206
Social	—
2-parent households	81.47055049
Voting	94.88002053
Neighborhood	—
Alcohol availability	65.40485051
Park access	81.35506224
Retail density	57.48748877
Supermarket access	48.13293982
Tree canopy	80.44398819
Housing	—
Homeownership	53.41973566

Housing habitability	73.12973181
Low-inc homeowner severe housing cost burden	56.83305531
Low-inc renter severe housing cost burden	77.98023868
Uncrowded housing	73.51469267
Health Outcomes	—
Insured adults	94.43089953
Arthritis	0.0
Asthma ER Admissions	27.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	93.7
Cognitively Disabled	91.4
Physically Disabled	94.6
Heart Attack ER Admissions	61.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0

No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	6.2
Children	37.8
Elderly	52.4
English Speaking	63.9
Foreign-born	66.8
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	57.9
Traffic Density	79.2
Traffic Access	58.3
Other Indices	—
Hardship	8.5
Other Decision Support	—
2016 Voting	92.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	10.0
Healthy Places Index Score for Project Location (b)	98.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Lot acreage, building sf, and landscaping from site plans.
Construction: Construction Phases	Construction will occur 6 days a week from 6/1/2024 to 9/1/2025 per the data request form
Construction: Paving	paved area taken from impervious surface included in data request form
Operations: Vehicle Data	rates changed based on transportation analysis
Operations: Hearths	no fireplaces will be included per data request
Construction: Architectural Coatings	BAAQMD Regulation 8 Rule 3, nonflat coating
Operations: Architectural Coatings	BAAQMD Regulation 8 Rule 3, nonflat coating
Operations: Energy Use	All-electric design
Operations: Water and Waste Water	WTP 100% aerobic

Appendix D

Historical Resources Assessment

Rincon Consultants, Inc.
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510-834-4455

September 19, 2023
Project No. 23-14767

Claire Raybould, Senior Planner
City of Palo Alto
Planning & Community Environment Department
250 Hamilton Avenue
Palo Alto, California 94301

Subject: Historical Resources Assessment in Support of CEQA Documentation for the Proposed 739 Sutter Avenue Residential Project

Dear Ms. Raybould:

This letter report presents the findings of a historical resources assessment prepared by Rincon Consultants (Rincon) in support of California Environmental Quality Act (CEQA) documentation for the Proposed 739 Sutter Avenue Residential Project (Project). The project site is approximately 0.38 acres and includes one parcel, APN: 127-35-200, which is addressed 755 Sutter Avenue according to the City of Palo Alto's Online Parcel Report and 739 Sutter Avenue by the Santa Clara County Assessor; hereafter the property will be referred to as 739 Sutter Avenue to align with the proposed project's address (Attachment 1: Figure 1 and Figure 2). The project applicant proposes to demolish the existing one-story, eight-unit historic age apartment building constructed in 1954 and construct a new five-story, 12-unit town home residential building. This historical resource assessment was conducted to determine whether the project would result in an impact to historical resources and included a records search, background and archival research, and a pedestrian survey of the project site. The project is subject to CEQA, with the City of Palo Alto acting as the lead agency. This assessment was completed in compliance with CEQA.

Architectural Historian Josh Bevan, MSHP conducted archival research and was the primary author of this assessment. Architectural Historian JulieAnn Murphy, MSHP conducted the site visit, records search, and served as the project manager. Cultural Resources Director Steven Treffers, MHP, provided senior oversight. Geographic Information Systems Analyst Abby Robles prepared the figures found in this report. Mr. Bevan, Ms. Murphy, and Mr. Treffers meet the Secretary of the Interior's Professional Qualifications Standards (PQS) for history and architectural history (36 CFR, Part 61).

Methods and Findings

Cultural Resources Records Search

To identify previous cultural resources investigations and previously recorded cultural resources within a 0.5-mile radius of the project site, Rincon requested a search of the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC) at Sonoma State University on July 18, 2023. Rincon also reviewed the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historical Landmarks list, and the Built Environment Resources Directory (BERD). A summary of the results of the CHRIS records search is included in Attachment 2.

Previous Cultural Resources Studies

The CHRIS records search and background research identified 7 cultural resources studies within 0.5 mile of the project site (Attachment 2). Of these studies, one study, S-41536, was a survey of the entire city limits which included the project site and is described below.

S-41536

Michael Corbett and Denise Bradley of Dames and Moore prepared "Final Survey Report: Palo Alto Historical Survey Update" between 1997 and 2000 for the City of Palo Alto. The purpose of the report was to present the findings of a multi-year survey update to identify, record and evaluate properties that appeared eligible for listing in the NRHP. The Survey Update evaluated 291 properties, of which 165 were recommended eligible for listing in the NRHP. Additionally, the survey identified 13 potential historic districts. As part of the survey, the report also included a robust contextual history of the city of Palo Alto and its early stages of development. The study did not include any information on any properties on Sutter Avenue, inclusive of the project site.

Previously Recorded Cultural Resources

The CHRIS records search and background research identified four cultural resources, all archaeological sites, within a 0.5 mile of the project site. A list of resources recorded in the search radius are included in Attachment 1. None of these resources are located within or immediately adjacent to the project site (Attachment 2). The closest known resource is over 0.25 miles from the project site.

Archival and Background Research

Rincon completed background and archival research in support of this study in August 2023. A variety of primary and secondary source materials were consulted. Sources included, but were not limited to, historical maps, aerial photographs, and written histories of the area. The following sources were utilized to develop an understanding of the project site and its context:

- Santa Clara County Assessor's Office
- Historical property records provided by the City of Palo Alto
- Historical aerial photographs accessed via NETR Online
- Historical aerial photographs accessed via University of California, Santa Barbara Library FrameFinder
- Historical newspaper clippings obtained from Newspapers.com, ProQuest Historical Newspapers.com, and the California Digital Newspaper Collection
- Various historical records via Ancestry.com
- Available environmental reports

Pedestrian Survey

Architectural Historian and Project Manager JulieAnn Murphy conducted a historical resources survey of the project site on July 26, 2023. Ms. Murphy completed a visual inspection of built environment features on the project site from the public right-of-way to assess their overall condition and integrity, and to identify and document any potential character-defining features. Observations were recorded using detailed notes and digital photographs. Due to the screening of the exterior from trees, additional photographs documenting existing conditions were provided to Rincon by the project applicant on

September 18, 2023. In accordance with the guidelines of the California Office of Historic Preservation, properties over 45 years of age were recorded and evaluated for historical resources eligibility on California Department Parks and Recreation (DPR) 523 series forms, which are included as an attachment.

National Register of Historic Places

Although the project does not have a federal nexus, properties which are listed in or have been formally determined eligible for listing in the NRHP are automatically listed in the CRHR. The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Per 36 CFR Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Is associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Is associated with the lives of persons significant in our past

Criterion C: Embodies the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting: The physical environment of a historic property

Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time

Association: The direct link between an important historic event or person and a historic property

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluate significance

(National Park Service 1997:41). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC Sections 5024.1 and Title 14 Section 4852. The CRHR is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use in order to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP however, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2011). Furthermore, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2011). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

A property is eligible for listing in the CRHR if it meets one of more of the following criteria:

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

Criterion 2: Is associated with the lives of persons important to our past

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history

Local Criteria

Along with National and State criteria for historic resources, the City of Palo Alto's Municipal Code includes criteria for designating historic structures and sites in Section 16.49.040. The local criteria are stated as:

(1) The structure or site is identified with the lives of historic people or with important events in the city, state, or nation;

(2) The structure or site is particularly representative of an architectural style or way of life important to the city, state, or nation;

(3) The structure or site is an example of a type of building which was once common, but is now rare;

(4) The structure or site is connected with a business or use which was once common, but is now rare;

(5) The architect or building was important;

(6) The structure or site contains elements demonstrating outstanding attention to architectural design, detail, materials, or craftsmanship.

Results

The following section summarizes the results of background research and fieldwork as they pertain to built environment resources that may qualify as historical resources. The field work and background research resulted in the identification of one historic-age building within the project site, 739 Sutter Avenue, which was built in 1954. As part of the assessment, the property was recorded and evaluated for historical resources eligibility on DPR series forms, which are included in Attachment 3 and summarized below.

739 Sutter Avenue

Physical Description

The subject building is a one-story, wood-frame apartment building with a concrete foundation. The building's footprint is L-shaped, formed by the main mass rectangular building mass and an attached carport and laundry facilities structure on the southwest façade. The building contains eight apartment units, each with an entrance door at the exterior of the building and an enclosed outdoor yard area with patio. The apartments are arranged with four facing to the southeast (toward Sutter Avenue) and four facing to the northwest (toward the rear property line) (Attachment 1: Figure 3).

The building is designed in a mid-twentieth century vernacular residential style (Attachment 1: Figure 4). The exterior walls are finished with a smooth and unadorned stucco. The overhanging flat roof has an elevated central section (similar to a monitor), with 16 square skylights (two per unit, one slightly larger than the other). The roof is trimmed with metal fascia trim and wood rafters with open soffits. The main roof and that over the carport are covered with composition materials, while roof extensions over each apartment's outdoor patio area feature a corrugated metal roofing material. The composition roofing material appears to be a replacement covering material, as property records indicate the roof was originally covered with tar and gravel. Windows throughout are vinyl and appear to be replacements to originals of an unknown material, potentially aluminum, which was used commonly for apartment buildings constructed in the 1950s. Entrance doors to each apartment are flush wood, with exterior metal security doors (Attachment 1: Figure 5).

The perimeter of the site is enclosed by a wood board-and-batten fence. Similar fencing divides lawn areas for each of the apartments and largely screens apartments facing Sutter Avenue from public view. Beyond the building and adjacent enclosed lawn areas, the site is paved with asphalt adjacent to the carport structure (Attachment 1: Figure 6).

General Site History

The area surrounding the subject property, much like other areas in the Bay Area's Peninsula region, was widely utilized for agriculture in the early 1900s through World War II. The subject building was constructed within the Bell Tract subdivision, which was recorded in 1953, during a period of broader postwar suburban development in Palo Alto, which followed a similar trend along the Peninsula (Peninsula Times Tribune 1955). Aerial photography from 1948 shows the subject property was vacant land between San Carlos Court (northwest) and the Matadero Canal (southeast), a section of Matadero Creek that runs between El Camino Real and US 101 (NETR 1948) and was culverted during interwar years.

Development of residential subdivisions and some commercial uses in the immediate vicinity commenced in by the late 1940s and Sutter Avenue was laid out to its current length and cul-de-sac form, with developed properties along its length by 1956 (NETR 1948, 1956). Nearby Middlefield Road, from which Sutter Avenue extends to the east, was and remains one of the major north-south

thoroughfares through the city. In 1960s, the planning and construction of the Oregon Expressway to in the immediate area north of Sutter Avenue and the area now known as Midtown, sparked intensive debate over the construction of a four-lane, east-west thoroughfare to serve increasing automobile traffic (PaloAltoHistory.org 2023).

During the 1960s, several residential subdivisions were built in the southern and southwestern areas of the City of Palo Alto, among them several notable subdivisions developed by Joseph Eichler. The entire region south and west of the Bayshore Freeway was fully developed with residential and commercial properties by the late 1960s. Development continued east of the Bayshore Freeway in the early 1980s and has remained largely the same since that time.

Property Specific History

739 Sutter Avenue

The building at 739 Sutter Avenue was built in 1954 (Palo Alto Development Center Records). The subject building was built concurrently with two neighboring apartment buildings of essentially identical design at 717 and 727 Sutter Avenue. Historic property assessment files at the Palo Alto Development Center identify Howard Ruth, Jr. as the original owner-developer of the apartment buildings. Ruth, Jr. contracted with Los Altos-based general contractor Stanley J. Brown for the construction of the three buildings. Since the subject building's original construction, few alterations have been undertaken. It appears that original windows, likely to have been wood or aluminum sash, were replaced by vinyl sash windows at an unknown date. The original tar and gravel roof was replaced by composition/built-up materials. In 1998, the Palo Alto Architectural Review Board approved a permit application that would have resulted in modification of the carport structure to function as a garage, with garage doors in each bay; however, this alteration was never undertaken. The building has otherwise remained unchanged.

Howard Ruth, Jr.

Howard Ruth, Jr. (1918-1992) is listed as the original owner of 739 Sutter Street on the property's assessment card, on file with the city's Development Center. Ruth, Jr. was born in Texas, attended Fresno High School and later Stanford University, and resided in Livermore by 1942, the year he married his wife Martha Ruth (nee Weisert) (1922-1988) while stationed in the region as a U.S. Naval Air Corps instructor (Fresno Bee, 1942). Martha Weisert grew up in Fresno, attended the same high school, and Fresno State College (Fresno Bee, 1942). The 1950 Census recorded Ruth, Jr. and his family as residents of 117 Cowper Street in Palo Alto (Ancestry.com 2023). Ruth, Jr.'s occupation was listed as a sprinkler and irrigation system contractor. A 1951 legal notice published in the *Peninsula Times Tribune* described the dissolution of a business partnership, R&M Heating & Plumbing, between Howard Ruth, Jr. and fellow Palo Alto-based contractor Severne E. Mott (Peninsula Times Tribune, 1951). By 1954, the year the subject building was constructed, the Ruth family lived at 2934 Cowper Street, and Howard's occupation changed to building contractor, similar to the occupation his father held as a Palo Alto resident from 1948-1953 before relocating to San Luis Obispo, where he died in 1956. Ruth, Sr.'s obituary noted that he was an owner-manager of several properties on the Peninsula while a Palo Alto resident (Peninsula Times Tribune 1956). By 1961, Ruth, Jr. and his family relocated to nearby Los Gatos, where Howard Ruth, Jr. worked as President of the Northern California Small Business Investment Co. (1961 Palo Alto City Directory). Public records indicate Ruth, Jr. died in 1992.

Stanley J. Brown

Stanley John Brown (1903-1997) was a Los Altos-based residential contractor at the time of the subject property's original construction. Brown resided in Alameda, California where he worked as a building trades apprentice before relocating to Los Altos. During the 1950s and 1960s, Brown built houses in Napa, Sunnyvale, Santa Clara, and San Jose, including a number of single-family houses in subdivisions developed by Thomas G. Stone Enterprises of Palo Alto (Daily Independent Journal 1955, Napa Valley Register 1962). One of the houses that Brown constructed was an "Idea Home, " one of a reported 100 models designed and constructed across the nation based on "the suggestions of *Better Homes & Gardens"* magazine readers (Peninsula Times Tribune 1955). The house was built in San Jose, California and appears to be non-extant. Additional documentation of Brown's career was not found for years beyond the mid-1960s.

Occupancy History

Typical of a multifamily residential building, 739 Sutter Avenue has had a number of residents. Table 1 below contains occupancy information for the eight units within the building, based upon data published in city directories for the City of Palo Alto. The first city directory to list the subject building's apartments was published in 1956. The latest available City Directory for Palo Alto was published in 1976[1]. Since that time, according to other available directory information, 739 Sutter Avenue has continued to have a number of tenants.

Table 1 Occupancy History for 739 Sutter Avenue (8 Units)

Year	Address and Occupants
1956 (1st year in city directory)	733-Roy Page Jr. 735-Robert Q. Mervin 737-Henry C. Henking 739-John W. McCormick 741-Frank W. Caddell 743-Eric Homestead 745-Leo J. Shannon 747-Jack D. Nelson 749-Emily Holtman 751-Michl E Polom 753-Maurice W. Johnson 755-Marjorie Mitchell

[1] Note, the property's historic assessment record listed addresses 733 to 747 (odd) as eight units within the subject building, while the Palo Alto Parcel Report lists units 739 to 755 (odd) as nine addresses associated with the building. Thus, it appears that addresses for the apartments within the building may have changed over time. Therefore, Rincon researched occupancy for the identified addresses from 733 to 755 (odd).

Year	Address and Occupants
1961	733-Larry D. Simmons 735-James A. Bausno 737-Henry C. Henking 739-John W. McCormick 741-Beth Lonon 743-Eric Homestead 745-Harland H. Schmidt 747-Wolfgang Reckendorf 749-L.K. Tilcens 751-Theo Steelman 753-Gunter Lumer 755-Onie E. Hudson
1965	733-Stan P. Mengel 735-Edward Crothers 737-Not listed 739-John W. McCormick 741-Albert Anderson 743-Vacant 745-Donald Lander 747-Gerald Gooch 749-John D. Whittenberger 751-Vacant 753-Herman M. Kaplan 755-Onie E. Hudson
1969	733-Mary Newell 735-Frederick Schotland 737-Sue Washington 739-John W. McCormick 741-Christa Bacq 743-Carl Thomson 745-Olivia Price 747-Sandra Quinn 749-Kathy Shepherd 751-Dean Williamson 753-Mrs. Gayle B. Voll 755-Margaret T. Barnes
1974	733-William J. Capp 735-Luis Canales 737-Eleanor H. Randolph 739-Dennis Erickson 741-Mrs. Maurice Bacq 743-B. Albrecht 745-Olivia R. Price 747-W. Dan Martin 749-Dianne Lowe 751-M.J. Cump 753-Mrs. Gayle Voll 755-Margaret T. Barnes

Year	Address and Occupants
1976	733-William J. Capp 735-Masahiro Kawaguchi 737-Wayne O. Naylor 739-Dennis Erickson 741-Mrs. Maurice Bacq 743-Patricia Morris 745-Olivia R. Price 747-Deborah A. Rose 749-Margaret J. Bell 751-J. Merwin 753-Cath Dearborn 755-Margaret T. Barnes

Historical Resources Evaluation

739 Sutter Avenue

The subject property is recommended ineligible for listing in the NRHP, CRHR or local listing under any eligibility criteria.

Following World War II, Palo Alto experienced rapid population growth, coinciding with a trend of suburbanization across the Peninsula, where agricultural lands between San Francisco and San Jose gave way to suburban tracts, office and industrial parks, and highways. This property was built in 1954, on Sutter Avenue, a cul-de-sac extending eastward off Middletown Road, that was laid down on land within the Bell Tract, a subdivision containing remnant vacant land during the early 1950s. Research did not identify the Bell Tract or Sutter Avenue as developments significant to Palo Alto's postwar development. Although built during a time of much residential development in Palo Alto during immediate postwar years, the subject building does not appear to be individually significant within the pattern of postwar development, nor was it identified as being the location of any historical events with significance to Palo Alto's history, or that of the state or nation. The building is therefore recommended ineligible for listing in the NRHP or CRHR under Criterion A/1.

Research through newspapers and Ancestry databases, including Palo Alto city directories, did not yield any information on any significant individuals associated with the property. As a building occupied by numerous residents throughout its existence, with few identified tenants remaining occupants for more than a three to five years, the building is not strongly associated with a particular individual. The building's original developer, Howard Ruth, Jr., resided in Palo Alto during the early years of his ownership of the subject property, until approximately 1960, but was not found to have made significant contributions to local, state, or national history. Therefore, the property is recommended ineligible for listing to the NRHP or CRHR under Criterion B/2.

Built in 1954, this one-story apartment building with carport was constructed by Stanley J. Brown, a general contractor who practiced in the Bay Area during the 1950s and received occasional publicity as a builder of suburban tract houses. Very little information was otherwise found on Brown's career, and he does not appear to have made significant contributions to local postwar development or to have contributed to innovation or trend setting construction within his field. As an example of its type, era, and construction method, the subject building does not stand out as individually significant within the framework of Modern architecture or mid-twentieth century architectural design. The building is representative of vernacular regional construction, common to many communities in terms of its form, materiality, and does not stand out for exhibiting characteristics of a particular architectural style. The

property is, therefore, recommended ineligible for listing to the NRHP or CRHR under Criterion C/3. A review of available evidence and records search results does not suggest 739 Sutter Avenue has yielded or has the potential to yield information important to the prehistory or history of Palo Alto or the greater Bay Area, California, or the nation. It is recommended ineligible for listing to the NRHP or CRHR under Criterion D/4.

Additionally, the subject property is recommended ineligible for local designation. As detailed above, the subject property is not identified with the lives of historic people or with important events in the city, state or nation as no significant occupant of the building was identified (Criterion 1). The subject is not representative of an architectural style or way of life important to the city, state or nation (Criterion 2). Furthermore, it is not an example of a type of building which was once common but is now rare as many apartment buildings are located within this area, including two neighboring buildings of similar design (Criterion 3). The subject property is not connected to a business or use which was once common, but now rare. The building was constructed in 1954, and Palo Alto appears to retain a fairly high number of apartment buildings that were present in the area and across other areas of the city, during that time (Criterion 4). Stanley J. Brown does not appear to be a significant design/construction professional (Criterion 5). Lastly, the subject property does not contain elements that demonstrate outstanding attention to architectural design, detail, materials, or craftsmanship as it is an apartment building with a generally restrained design and common features typical of its era of construction (Criterion 6).

Conclusions

As detailed above, the property at 739 Sutter Avenue is recommended ineligible for listing in the NRHP or CRHR or for local listing. As such, the property does not qualify as a historical resource and its demolition would not result in a significant adverse impact as defined by Section 15064.5 of the CEQA Guidelines. Further, the CHRIS records search failed to identify other cultural resources, including historic districts, within close proximity to the project site. Finally, Rincon Consultants did not identify any information to suggest that the project area may be sensitive for archaeological resources. Based on the findings of this investigation, Rincon recommends a finding of ***no impact to historical resources*** under CEQA.

Should you have any questions concerning this study, please do not hesitate to contact the undersigned at 925-326-1159 or at jmurphy@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

Josh Bevan, AICP, MSHP
Architectural Historian

JulieAnn Murphy, MSHP
Architectural Historian Project Manager

Steven Treffers, MHP
Cultural Resources Director

Attachments

Attachment 1 Figures
Attachment 2 CHRIS Records Search Summary
Attachment 3 California DPR 523 Series Forms

References

Ancestry.com

2023 City Directories for City of Palo Alto, 1955-1976. Accessed August 2023, https://www.ancestry.com/search/collections/2469/.

California Office of Historic Preservation

1995 *Instructions for Recording Historical Resources*. Department of Parks and Recreation, Sacramento, California.

2011 "California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)," *California Office of Historic Preservation Technical Assistance Series #6*. Department of Parks and Recreation, Sacramento, California

2011 "California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)," *California Office of Historic Preservation Technical Assistance Series #6*. Department of Parks and Recreation, Sacramento, California

City of Palo Alto – Building Division

2023 Historic Property Assessment Card obtained for 739 Sutter Avenue.

Daily Independent Journal

2023 "The Better Homes & Gardens Idea Home of the Year." September 17, 1955, H55.

Fresno Bee

1942 "Ruth-Weisert Marriage is Solemnized in San Francisco." October 11, 1942.

Napa Valley Register

1962 "Contractor Arrested for Grand Theft." June 4, 1962.

National Park Service

1983 Secretary of the Interior's Standards Guidelines for Archaeology and Historic Preservation. Department of the Interior.

NETR Online

2023 "Historic Aerials." Various historic aerials and topographic maps of the project area. Accessed August 2023, https://www.historicaerials.com/.

PaloAltoHistory.org

2023 "The Oregon Expressway: Residentialists [sic] Unite." Palo Alto History.org. Accessed August 2023.

Peninsula Times Tribune

1951 "Legal Advertising." February 22, 1951

1955 "Idea Home." August 26, 1955, 16.

1956 "Howard Ruth Former P.A. Resident, Dies." Peninsula Times Tribune, November 24, 1956.

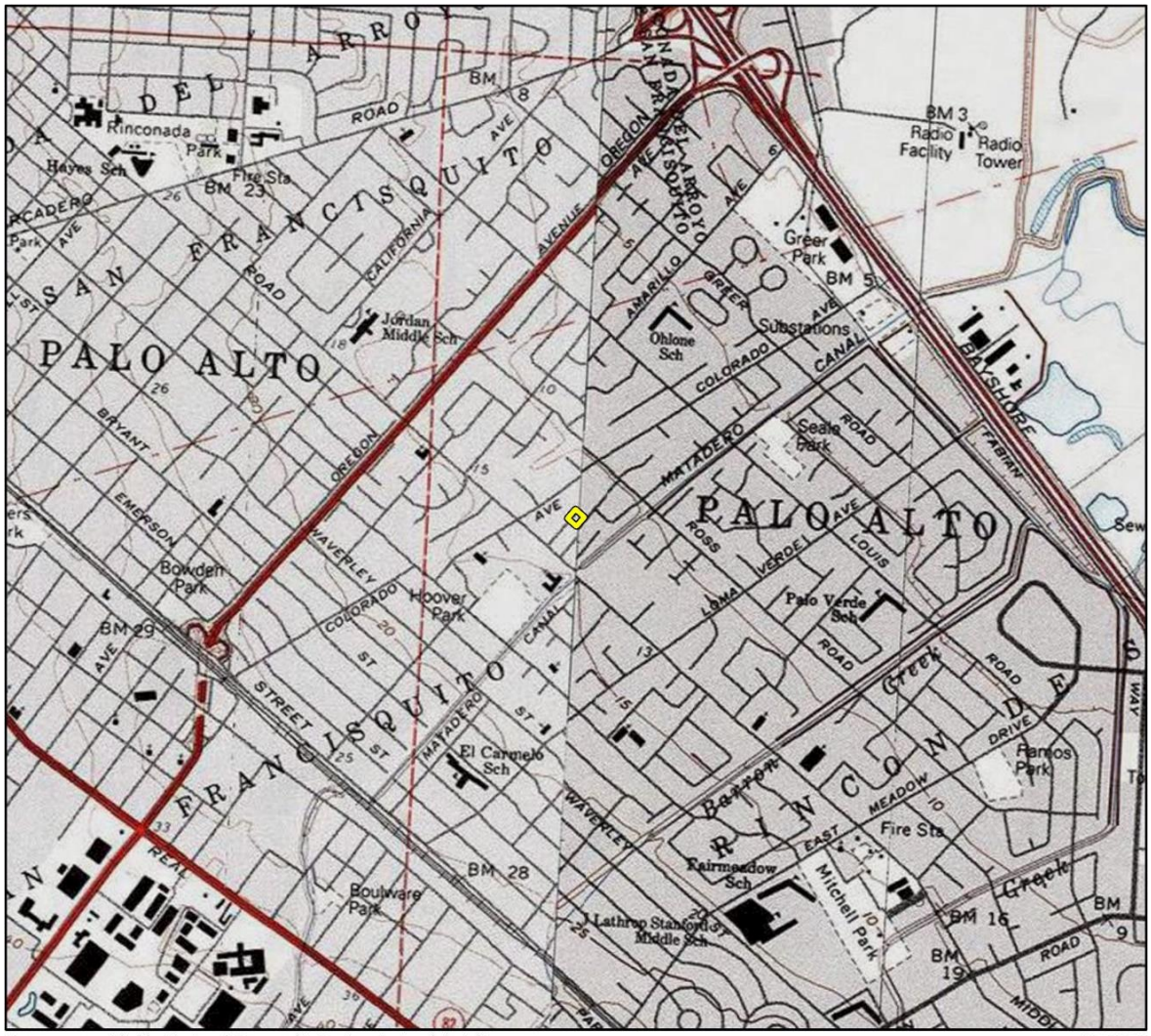
Parcel Quest

2023 Santa Clara County property information for 739 Sutter Avenue. Accessed August 2023, https://pqweb.parcelquest.com/#home.

Attachment 1

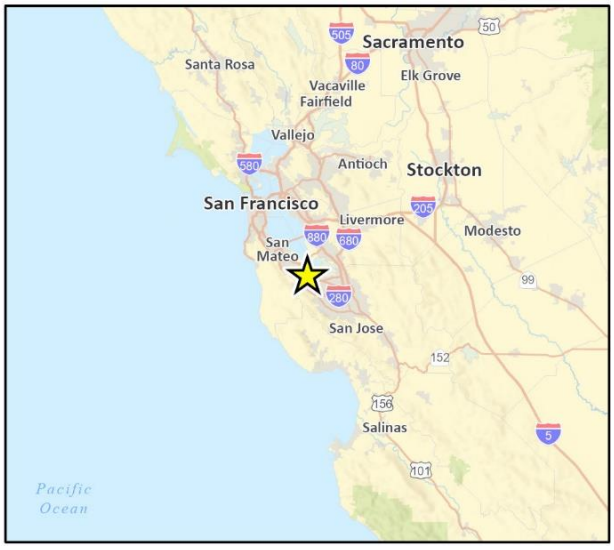
Figures

Figure 1 Project Location



Basemap provided by National Geographic Society, Esri and their licensors © 2023. Mountain View and Palo Alto Quadrangles. T06S R02W S06, 07. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

23-14767 CR
CRFig 1 Proj Locn Map



Project Location

0 1,000 2,000 Feet

N

Figure 2 Detailed Project Location

Imagery provided by Microsoft Bing and its licensors © 2023.

Figure 3 739 Sutter Avenue Primary Elevation, View West

Figure 4 739 Sutter Avenue Primary Elevation, View Southwest

Figure 5 739 Sutter Avenue Typical Unit Entry, View West

Figure 6 739 Sutter Avenue Carport, View Northeast

Attachment 2

CHRIS Results

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-041536		2001	Michael Corbett and Denise Bradley	Final Survey Report, Palo Alto Historical Survey Update, August 1997 - August 2000	Dames & Moore	43-000551

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-003163	Voided - E-171 SMA	1973	Stephen A. Dietz	An archaeological reconnaissance of the proposed Dumbarton Bridge replacement project (letter report)	Adan E. Treganza Anthropology Museum, San Francisco State College	
S-009442		1987	Robert Cartier	Cultural Resource Evaluation of the Matadero Creek Flood Control Project in the City of Palo Alto, County of Santa Clara	Archeological Resource Management	43-000023, 43-000580, 43-000611
S-020910		1998	Sunshine Psota	Review of Historic Resources for Site SF-142-02, 711 Colorado Avenue, Palo Alto, Santa Clara County, CA (50001 84/98) (letter report)	Anthropological Studies Center, Sonoma State University	
S-022978		2000	Mike Avina	Final Cultural Resources Inventory Report for Williams Communications, Inc. Fiber Optic Cable System Installation Project, San Francisco to Santa Clara, San Francisco, San Mateo, and Santa Clara Counties: Addendum 1	Jones & Stokes	41-000009, 41-000230, 41-000311, 41-000498, 43-000055
S-026045		2000	Richard Carrico, Theodore Cooley, and William Eckhardt	Cultural Resources Reconnaissance Survey and Inventory Report for the Metromedia Fiberoptic Cable Project, San Francisco Bay Area and Los Angeles Basin Networks	Mooney & Associates	01-000038, 01-000040, 01-000042, 01-000068, 01-000072, 01-000091, 01-000092, 01-000108, 01-000120, 01-000233, 01-000239, 01-000240, 01-000241, 01-010527, 01-010528, 01-010529, 01-010530, 01-010531, 01-010532, 01-010533, 01-010534, 01-010535, 07-000719, 21-000034, 21-000097, 21-000529, 21-000536, 21-000563, 38-000015, 41-000009, 41-000044, 41-000077, 41-000095, 41-000105, 41-000152, 41-000169, 41-000172, 41-000174, 41-000187, 41-000230, 41-000231, 41-000232, 41-000281, 41-000302, 41-000310, 41-000311, 41-000312, 41-000315, 41-000318, 41-000640, 43-000021, 43-000024, 43-000028, 43-000042, 43-000050, 43-000058, 43-000141, 43-000338, 43-000369, 43-000382, 43-000383, 43-000388, 43-000396, 43-000398, 43-000418, 43-000424, 43-000444, 43-000462, 43-000467, 43-000472, 43-000551, 43-000565, 43-000595, 43-000617, 43-000619, 43-000621, 43-000669, 43-001010, 43-001071, 43-001083, 43-001084

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
S-036762		2010	Carrie Wills	Cultural Resources Record Search and Site Vistit for Clearwire Candidate CA-SJC0048C (Sprint Midtown), 2701 Middlefield Road, Palo Alto, Santa Clara County, California	Michael Brandman Associates	
S-045231	OHP PRN - FHWA 120531A; Voided - S-45232	2012	Robert Cartier	Environmentally Sensitive Area (ESA) Action Plan for the Oregon-Pagemill Expressway Project, Palo Alto, California: 04-SCL-0-0-CR	Archaeological Resource Management	43-000591, 43-002625
S-045231a		2012	Robert Cartier	Extended Phase I Excavation for CA-SCL-596 and C-434 for the Oregon-Pagemill Expressway Project, Palo Alto, California, 04-SCL-0-0-CR	Archaeological Resource Management	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-43-000055	CA-SCL-000036	Resource Name - Oregon Expressway	Site	Prehistoric	AP15	1951 (D.W. L., [none]); 1984 ([none], Basin Research); 1987 (Barb Bocek, Stanford University)	S-016394, S-022978
P-43-000591	CA-SCL-000596	Resource Name - Ross Road	Site	Prehistoric	AP09; AP15	1986 (Barbara Bocek, Warren Caldwell, Stanford University)	S-008728, S-016394, S-045231, S-045232
P-43-000670	CA-SCL-000708	Resource Name - Louis Road	Site	Prehistoric	AP15	1990 (Barb Bocek, Stanford University)	
P-43-002625	CA-SCL-000896	Resource Name - Louis-Oregon Site; Voided - C-434	Site	Prehistoric	AP15	2001 (Bert Gerow(?), Stanford University); 2012 (Robert Cartier, ARM)	S-045231, S-045232

Attachment 3

DPR Forms

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code 6Z

Other Listings
Review Code **Reviewer** **Date**

 ***Resource Name or #:** 739 Sutter Avenue

P1. Other Identifier: N/A
***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Santa Clara
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Palo Alto and Mountain View **Date:** 2023 **T** 6S ; **R** 2W; **¼ of ¼ of Sec** 6**; B.M.**
c. **Address:** 739 Sutter Avenue Palo Alto **City:** Palo Alto **Zip:**
d. **UTM:** Zone: mE/ mN (G.P.S.)
e. **Other Locational Data:** Santa Clara County APN 127-35-200 **Elevation:** 253 feet AMSL

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
739 Sutter Avenue is a multiple-family property on a rectangular parcel in the Midtown area of the City of Palo Alto. The property contains one 8-unit apartment building constructed in 1954. The subject building is a one-story with a wood-frame and a concrete foundation. The building's footprint is L-shaped, formed by the main mass rectangular building mass and an attached carport and laundry facilities structure on the southwest façade. The building contains eight apartment units, each with an entrance door at the exterior of the building and an enclosed outdoor yard area with patio. The apartments are arranged with four facing to the southeast (toward Sutter Avenue) and four facing to the northwest (toward the rear property line). The building is designed in a mid-twentieth century vernacular residential style. The exterior walls are finished with a smooth and unadorned stucco. The overhanging flat roof has an elevated central section (similar to a monitor), with 16 square skylights (two per unit, one slightly larger than the other). The roof is trimmed with metal fascia trim, and has open soffits. The main roof and that over the carport are covered with composition materials, while roof extensions over each apartment's outdoor patio area feature a corrugated metal roofing material. The composition roofing material appears to be a replacement covering material, as property records indicate the roof was originally covered with tar and gravel. Windows throughout are vinyl and appear to be replacements to originals of an unknown material, potentially aluminum, which was used commonly for apartment buildings constructed in the 1950s. Entrance doors to each apartment are flush wood , with exterior metal security doors. The perimeter of the site is enclosed by a wood board-and-batten fence. Similar fencing divides lawn areas for each of the apartments and largely screens apartments facing Sutter Avenue from public view. Beyond the building and adjacent enclosed lawn areas, the site is paved with asphalt adjacent to the carport structure. The building is in good condition.

***P3b. Resource Attributes:** (List attributes and codes) HP3. Multiple Family Property (8-unit apartment building)

***P4. Resources Present:**
■Building ☐Structure ☐Object ☐Site ☐District

P5b. Description of Photo: (View, date, accession #) 739 Sutter Avenue, Primary Elevation, View West, July 2023

***P6. Date Constructed/Age and Sources:**
■Historic ☐Prehistoric ☐Both

***P7. Owner and Address:**
Sutter 739 Associates LLC
950 31st Avenue
San Mateo, California 94403

***P8. Recorded by:** (Name, affiliation, and address)
JulieAnn Murphy
Rincon Consultants
449 15th Street #303
Oakland, California 94612

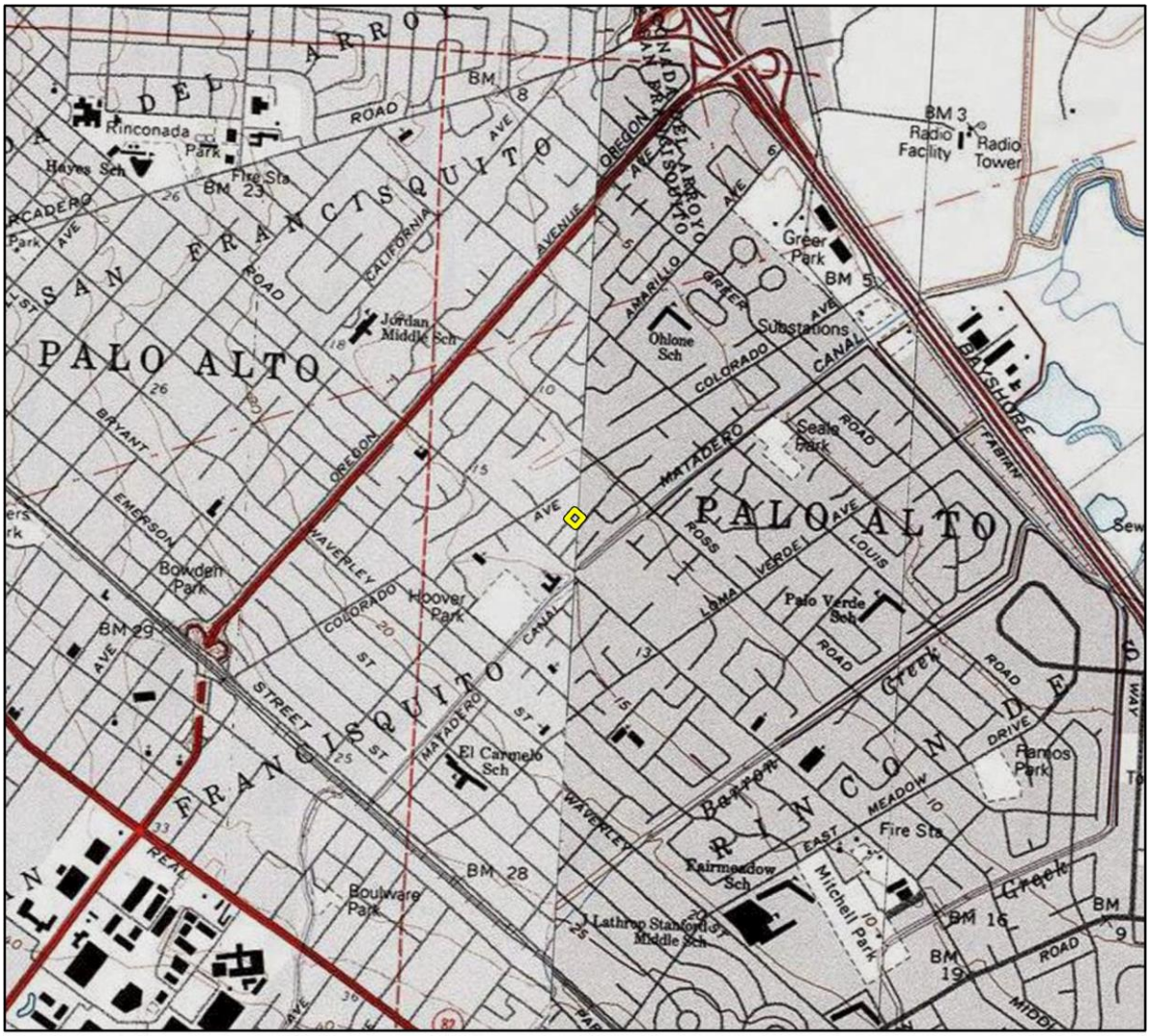
***P9. Date Recorded:** July 26, 2023
***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** Rincon Consultants, Inc. Historical Resources Assessment in Support of CEQA Documentation for the Proposed 739 Sutter Avenue Residential Project, Palo Alto, CA, (Ventura, CA: Rincon Consultants, Inc., 2023).
***Attachments:** ☐NONE ☐Location Map ☐Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency	Primary #
DEPARTMENT OF PARKS AND RECREATION	HRI#
LOCATION MAP	Trinomial

Page 2 **of** 5 ***Resource Name or #:** 739 Sutter Avenue

***Map Name:** Mountain View and Palo Alto Quadrangles ***Scale:** 1:24,000 ***Date of Map**: 2023



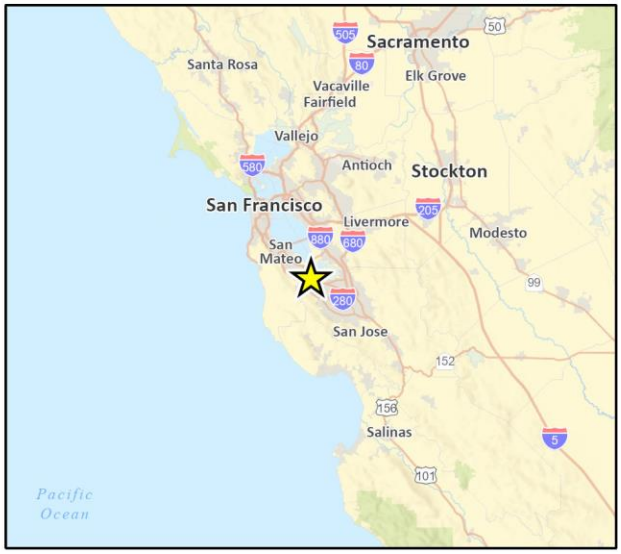
Basemap provided by National Geographic Society, Esri and their licensors © 2023. Mountain View and Palo Alto Quadrangles. T06S R02W S06, 07. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

23-14767 CR
CRFig 1 Proj Locn Map

Project Location

0 1,000 2,000 Feet

N



BUILDING, STRUCTURE, AND OBJECT RECORD

***NRHP Status Code** 6Z

***Resource Name or #** (Assigned by recorder)

B1. Historic Name: 739 Sutter Avenue
B2. Common Name: N/A
B3. Original Use: Apartments
B4. Present Use: Apartments

***B5. Architectural Style:** Vernacular

***B6. Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1954. Original tar and gravel roofing replaced with existing at unknown date. Original windows appear to have been replaced with existing replacement vinyl-sash windows at unknown date.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**

***B8. Related Features:** N/A

B9a. Architect: N/A
b. Builder: Stanley J. Brown, General Contractor

***B10. Significance: Theme:** N/A
Area: City of Palo Alto
Period of Significance: N/A **Property Type:** Residential **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The area surrounding the subject property, much like other areas in the Bay Area's Peninsula region, was widely utilized for agriculture in the early 1900s through World War II. The subject building was constructed within the Bell Tract subdivision, which was recorded in 1953, during a period of broader postwar suburban development in Palo Alto. Development of residential subdivisions and some commercial uses in the immediate vicinity commenced in by the late 1940s and Sutter Avenue was laid out to its current length and cul-de-sac form, with developed properties along its length by the mid-1950s. Nearby Middlefield Road, from which Sutter Avenue extends to the east, was and remains one of the major north-south thoroughfares through the city.

The building at 739 Sutter Avenue was built in 1954. The subject building was built concurrently with two neighboring apartment buildings of essentially identical design at 717 and 727 Sutter Avenue. Historic property assessment files at the Palo Alto Development Center identify Howard Ruth, Jr. as the original owner-developer of the apartment buildings. Ruth, Jr. contracted with Los Altos-based general contractor Stanley J. Brown for the construction of the three buildings. Since the building's original construction, its eight apartments have been occupied by numerous tenants.

B11. Additional Resource Attributes: (List attributes and codes)

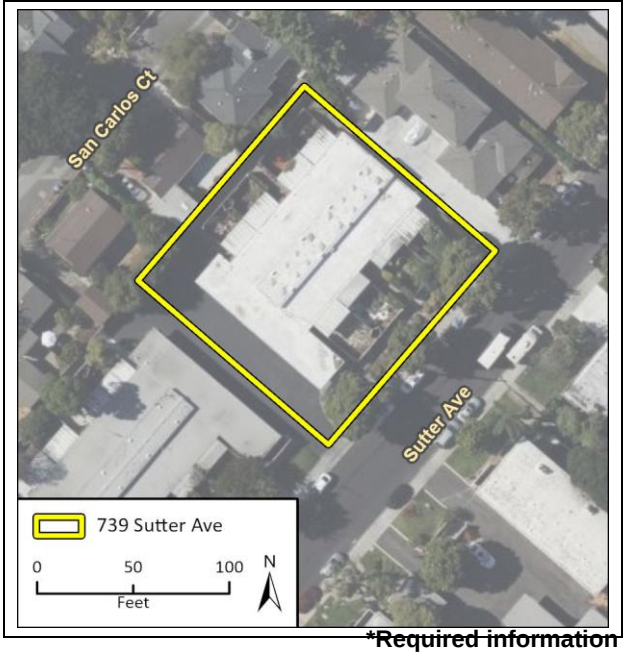
***B12. References:**

See Continuation Sheet.

B13. Remarks:

***B14. Evaluator:**
Josh Bevan, AICP and JulieAnn Murphy, Rincon Consultants

***Date of Evaluation:** September 2023



(This space reserved for official comments.)

***B10. Significance (Continued):**

Howard Ruth, Jr.

Howard Ruth, Jr. (1918-1992) is listed as the original owner of 739 Sutter Street on the property's assessment card, on file with the city's Development Center. Ruth, Jr. was born in Texas, attended Fresno High School and later Stanford University, and resided in Livermore by 1942, the year he married his wife Martha Ruth (nee Weisert) (1922-1988) while stationed in the region as a U.S. Naval Air Corps instructor (Fresno Bee, 1942). Martha Weisert grew up in Fresno, attended the same high school, and Fresno State College (Fresno Bee, 1942). The 1950 Census recorded Ruth, Jr. and his family as residents of 117 Cowper Street in Palo Alto (Ancestry.com 2023). Ruth, Jr.'s occupation was listed as a sprinkler and irrigation system contractor. A 1951 legal notice published in the *Peninsula Times Tribune* described the dissolution of a business partnership, R&M Heating & Plumbing, between Howard Ruth, Jr. and fellow Palo Alto-based contractor Severne E. Mott (Peninsula Times Tribune, 1951). By 1954, the year the subject building was constructed, the Ruth family lived at 2934 Cowper Street, and Howard's occupation changed to building contractor, similar to the occupation his father held as a Palo Alto resident from 1948-1953 before relocating to San Luis Obispo, where he died in 1956. Ruth, Sr.'s obituary noted that he was an owner-manager of several properties on the Peninsula while a Palo Alto resident (Peninsula Times Tribune 1956). By 1961, Ruth, Jr. and his family relocated to nearby Los Gatos, where Howard Ruth, Jr. worked as President of the Northern California Small Business Investment Co. (1961 Palo Alto City Directory). Public records indicate Ruth, Jr. died in 1992.

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Historical Resources Evaluation

The subject property is recommended ineligible for listing in the NRHP, CRHR or local listing under any eligibility criteria.

Following World War II, Palo Alto experienced rapid population growth, coinciding with a trend of suburbanization across the Peninsula, where agricultural lands between San Francisco and San Jose gave way to suburban tracts, office and industrial parks, and highways. This property was built in 1954, on Sutter Avenue, a cul-de-sac extending eastward off Middletown Road, that was laid down on land within the Bell Tract, a subdivision containing remnant vacant land during the early 1950s. Research did not identify the Bell Tract or Sutter Avenue as developments significant to Palo Alto's postwar development. Although built during a time of much residential development in Palo Alto during immediate postwar years, the subject building does not appear to be individually significant within the pattern of postwar development, nor was it identified as being the location of any historical events with significance to Palo Alto's history, or that of the state or nation. The building is therefore recommended ineligible for listing in the NRHP or CRHR under Criterion A/1.

Research through newspapers and Ancestry databases, including Palo Alto city directories, did not yield any information on any significant individuals associated with the property. As a building occupied by numerous occupants throughout its existence, with few identified tenants remaining occupants for more than a three to five years, the building is not strongly associated with a particular individual. The building's original developer, Howard Ruth, Jr., resided in Palo Alto during the early years of his ownership of the subject property, until approximately 1960, but was not found to have made significant contributions to local, state, or national history. Therefore, the property is recommended ineligible for listing to the NRHP or CRHR under Criterion B/2.

Built in 1954, this one-story apartment building with carport was constructed by Stanley J. Brown, a general contractor who practiced in the Bay Area during the 1950s and received occasional publicity as a builder of suburban tract houses. Very little information was otherwise found on Brown's career, and he does not appear to have made

significant contributions to local postwar development or to have contributed to innovation or trend setting construction within his field. As an example of its type, era, and construction method, the subject building does not stand out as individually significant within the framework of Modern architecture or mid-twentieth century architectural design. The building is representative of vernacular regional construction, common to many communities in terms of its form, materiality, and does not stand out for exhibiting characteristics of a particular architectural style. The property is, therefore, recommended ineligible for listing to the NRHP or CRHR under Criterion C/3. A review of available evidence and records search results does not suggest 739 Sutter Avenue has yielded or has the potential to yield information important to the prehistory or history of Palo Alto or the greater Bay Area, California, or the nation. It is recommended ineligible for listing to the NRHP or CRHR under Criterion D/4.

Additionally, the subject property is recommended ineligible for local designation. As detailed above, the subject property is not identified with the lives of historic people or with important events in the city, state or nation as no significant occupant of the building was identified (Criterion 1). The subject is not representative of an architectural style or way of life important to the city, state or nation (Criterion 2). Furthermore, it is not an example of a type of building which was once common but is now rare as many apartment buildings are located within this area, including two neighboring buildings of similar design (Criterion 3). The subject property is not connected to a business or use which was once common, but now rare. The building was constructed in 1954, and the City appears to retain a fairly high number of apartment buildings that were present in the area and across other areas of the City, during that time (Criterion 4). Stanley J. Brown does not appear to be a significant design/construction professional (Criterion 5). Lastly, the subject property does not contain elements that demonstrate outstanding attention to architectural design, detail, materials, or craftsmanship as it is an apartment building with a generally restrained design and common features typical of its era of construction (Criterion 6).

***B12. References (Continued)**

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