440 1st Street Residential Project

Air Quality Study

prepared for

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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential air quality impacts of the proposed 440 1st Street Residential project (herein referred to as "proposed project" or "project") in Los Altos, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to GreenTek Homes for the City of Los Altos to use in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's air quality impacts related to both temporary construction activity and long-term operation of the project. The conclusions of this study are summarized in Table 1.

Table 1 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance
Would the project conflict with or obstruct implementation of the applicable air quality plan?	No Impact
Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less than significant impact
Would the project expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant impact

1.2 Project Summary

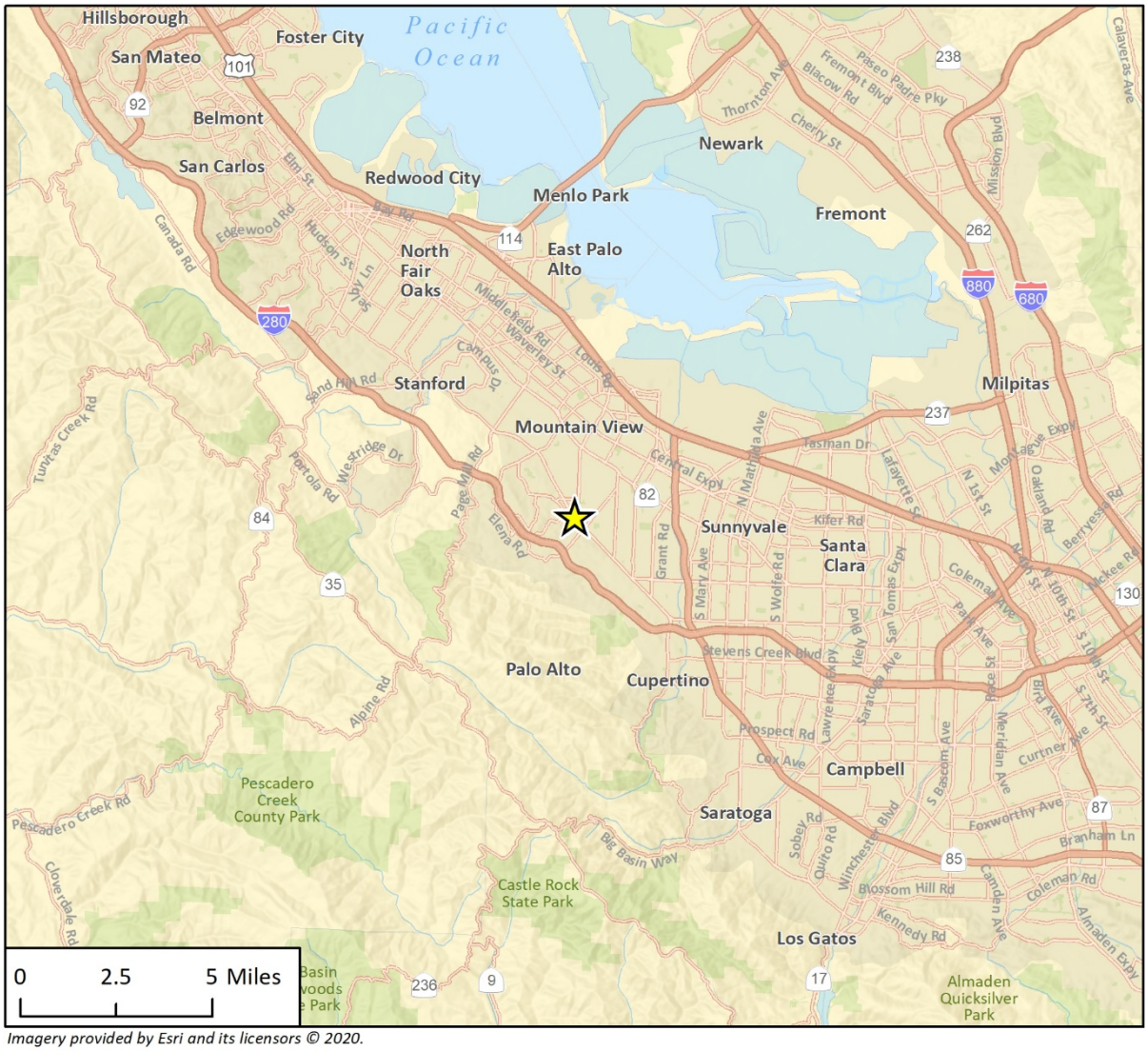
Project Location

The project site is an approximately 0.1-acre lot (Assessor Parcel Number [APN] 187-41-009) in the city of Los Altos. The project site is zoned Commercial Downtown/Multiple-Family (CD/R3) with a General Plan Land Use designation of Downtown Commercial (DC) within the Los Altos Plan Area. The project site currently contains the Los Altos Veterinary Clinic and its associated parking lot. The surrounding area is a mixture of commercial and residential uses. The properties to the north, east, and south are zoned CD/R3 and are developed with multi-family residential uses, mixed retail uses, and commercial uses, respectively. The property to the west across Foothill Expressway is zoned Public & Community Facilities (PCF) and consists of a linear park with public art, utility transmission lines, and a parking lot. See Figure 1 and Figure 2 for the project site location in a regional context and local context, respectively.

Project Description

The proposed project consists of the demolition of the existing approximately 2,000-square-foot veterinary clinic and the construction of a four condominium units with a total floor area of approximately 11,735 square feet, one level of subterranean parking with nine parking spaces, and sidewalk improvements.

Figure 1 Regional Location Map



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Project Location

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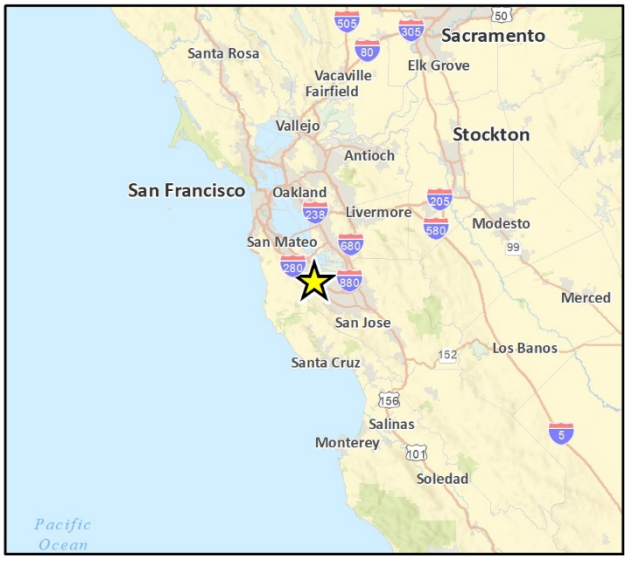

Figure 2 Project Site Location

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The ground floor of the proposed condominium building would include a main lobby, a gym, and the lower level of two residential units (units 101 and 102), each with a dining room, kitchen, office, living room, bathroom, and outdoor decks. The second floor of the building would include the upper levels of units 101 and 102, each with a family room, two bathrooms, two bedrooms, and outdoor balconies on the western and eastern sides of the building. The third floor of the building would include two residential units (units 301 and 302), each with two bedrooms, two bathrooms, a kitchen, a dining room, a living room, and an outdoor balcony. The roof of the proposed building would include two roof decks with outdoor kitchens for units 301 and 302 as well as mechanical equipment and landscaping. The project would include sustainability features such as water efficient fixtures, water efficient irrigation systems, energy efficient appliances and fixtures, four charging stations with each station to serve two spaces (eight total electric vehicles charging spaces), and a 30-kilowatt (kW) solar photovoltaic (PV) system. See Appendix A for the project site plans.

Construction

Project construction is expected to commence in February 2021 and be completed by December 2022 in accordance with the following schedule:

- Demolition – approximately three days
- Site Preparation – approximately two days
- Grading – approximately 20 days
- Building Construction – approximately 18 months
- Concrete Sidewalk Installation – approximately five days
- Architectural Coating – approximately two months

Construction activities would occur six days per week, Monday through Saturday. The project would require export of approximately 1,600 cubic yards of soil material via haul trucks with 20 cubic yard capacity.

2 Environmental and Regulatory Setting

2.1 Local Climate and Meteorology

The Southwest area is located in the "Santa Clara Valley" climatological subregion of the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). This subregion is bounded by the Bay to the north and by mountains to the east, south and west. Temperatures are warm on summer days and cool on summer nights, and winter temperatures are fairly mild. At the northern end of the valley, mean maximum temperatures are in the low 80 degrees Fahrenheit (°F) during the summer and the high 50 °F during the winter, and mean minimum temperatures range from the high 50°F in the summer to the low 40°F in the winter. Further inland, where the moderating effect of the Bay is not as strong, temperature extremes are greater. For example, in San Martin, located 27 miles south of the San Jose Airport, temperatures can be more than 10 degrees warmer on summer afternoons and more than 10 degrees cooler on winter nights (BAAQMD 2017a).

Air quality in the SFBAAB is affected by the emission sources located in the region and by natural factors. Air pollutant emissions in the SFBAAB are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Atmospheric conditions such as wind speed and direction, air temperature gradients, and local and regional topography influence air quality. Complex topographical features, the location of the Pacific high-pressure system, and varying circulation patterns associated with temperature gradients affect the speed and direction of local winds, which play a major role in the dispersion of pollutants. Strong winds can carry pollutants far from their source, but a lack of wind will allow pollutants to concentrate in an area. Air dispersion also affects pollutant concentrations. As altitude increases, air temperature normally decreases. However, inversions can occur when colder air becomes trapped below warmer air, restricting the air masses' ability to mix. Pollutants also become trapped, which promotes the production of secondary pollutants. Subsidence inversions, which can occur during the summer in the SFBAAB, result from high-pressure cells that cause the local air mass to sink, compress, and become warmer than the air closer to the earth. Pollutants accumulate as this stagnating air mass remains in place for one or more days (BAAQMD 2017a).

The air pollution potential of the Santa Clara Valley is high. High summer temperatures, stable air, and mountains surrounding the valley combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo and Alameda Counties are carried by prevailing winds to the Santa Clara Valley. The valley tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, ozone can be

recirculated by southerly drainage winds in the late evening and early morning and by the prevailing northwesterly winds in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of air up and down the valley increases the impact of pollutants significantly.

Pollution sources are plentiful and complex in this subregion. The Santa Clara Valley has a high concentration of industry at the northern end in the Silicon Valley. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara Valley's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the SFBAAB (BAAQMD 2017a).

2.2 Air Pollutants of Primary Concern

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards (AAQS) for "criteria pollutants" and other air pollutants. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere and include carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[1] nitrogen oxides (NO_X), fine particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide, and lead. Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions primarily between ROG and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). The characteristics, sources and effects of criteria pollutants are discussed in the following subsections.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between NO_X and ROG. ROG are composed of non-methane hydrocarbons (with some specific exclusions), and NO_X is composed of different chemical combinations of nitrogen and oxygen, mainly nitric oxide and nitrogen dioxide. NO_X are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. As a highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NO_X levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant. In addition, because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation, aggravation of respiratory diseases such as asthma and bronchitis, possible changes in lung functions, and permanent damage to lung tissue (BAAQMD 2017a). Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this report.

Carbon Monoxide

Carbon monoxide is a localized pollutant that is found in high concentrations only near its source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is the incomplete combustion of petroleum fuels by automobile traffic. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of carbon monoxide include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces during the winter. The health effects of carbon monoxide are related to its affinity for hemoglobin in the blood. Carbon monoxide causes a number of health problems including fatigue, headache, confusion, and dizziness. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities (BAAQMD 2017a). Carbon monoxide tends to dissipate rapidly into the atmosphere; consequently, violations of AAQS for carbon monoxide are generally associated with localized carbon monoxide "hotspots" that can occur at major roadway intersections during heavy peak-hour traffic conditions.

Nitrogen Dioxide

Nitrogen dioxide is a by-product of fuel combustion; the primary sources are motor vehicles and industrial boilers and furnaces. The principal form of NO_X produced by combustion is nitric oxide, but nitric oxide reacts rapidly to form nitrogen dioxide, creating the mixture of nitric oxide and nitrogen dioxide commonly called NO_X. Nitrogen dioxide is an acute irritant that can aggravate respiratory illnesses and increase the risk of acute and chronic respiratory diseases (BAAQMD 2017a). A relationship between nitrogen dioxide and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility (BAAQMD 2017a). It can also contribute to the formation of PM_{10} and acid rain.

Sulfur Dioxide

Sulfur dioxide is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide. Collectively, these pollutants are referred to as sulfur oxides (SO_X). In humid atmospheres, SO_2 can also form sulfuric acid mist, which can eventually react to produce sulfate particulates that can inhibit visibility. Combustion of high sulfur-content fuels is the major source of SO_2, while chemical plants, sulfur recovery plants, and metal processing are minor contributors. At sufficiently high concentrations, SO_2 irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO_2 appears to do still greater harm by injuring lung tissues. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. Sulfur dioxide is linked with a number of adverse effects on the respiratory system, including irritation of lung tissue, aggravation of respiratory diseases, increased risk of acute and chronic respiratory diseases, and reduced lung function (BAAQMD 2017a). Sulfur oxides, in combination with moisture and oxygen, can yellow leaves on plants, dissolve marble, and eat away iron and steel.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (small particulate matter that measures no more than 10 microns in diameter) and $PM_{2.5}$ (fine particulate

matter that measures no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems (CARB 2020a). More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance (South Coast Air Quality Management District 2005). Suspended particulates can also reduce lung function, aggravate respiratory and cardiovascular diseases, increase mortality rates, and reduce lung function growth in children (BAAQMD 2017a).

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial sources. However, as a result of the U.S. EPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants (U.S. EPA 2013). As a result of phasing out leaded gasoline, metal processing currently is the primary source of lead emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. The health impacts of lead include behavioral and hearing disabilities in children and nervous system impairment (BAAQMD 2017a).

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about $1/70^{th}$ the diameter of a human hair) and thus is a subset of $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (CARB 2020a). Particulate matter emitted from diesel engines contributes more than 85 percent of the cancer risk within the SFBAAB, and cancer risk from TACs is highest near major diesel PM sources (BAAQMD 2014).

TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC

impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

2.3 Air Quality Regulation

Federal and California Clean Air Acts

The federal CAA governs air quality in the United States and is administered by the U.S. EPA at the federal level. Air quality in California is also governed by regulations under the California CAA, which is administered by the CARB at the state level. At the regional and local levels, local air districts such as the BAAQMD typically administer the federal and California CAA. As part of implementing the federal and California CAA, the U.S. EPA and the CARB have established ambient air quality standards for major pollutants at thresholds intended to protect public health. Table 2 summarizes the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS). The CAAQS are more restrictive than the NAAQS for several pollutants, including the one-hour standard for carbon monoxide, the 24-hour standard for sulfur dioxide, and the 24-hour standard for PM_{10}.

Table 2 Ambient Air Quality Standards & Basin Attainment Status

		California Ambient Air Quality Standards		National Ambient Air Quality Standards	
Pollutant	Averaging Time	Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8-Hour	0.070 ppm	N	0.070 ppm	N
	1-Hour	0.09 ppm	N	–	–
Carbon Monoxide	8-Hour	9.0 ppm	A	9 ppm	A
	1-Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1-Hour	0.18 ppm	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	A
Sulfur Dioxide	24-Hour	0.04 ppm	A	0.14 ppm	U
	1-Hour	0.25 ppm	A	0.075 ppm	U
	Annual Arithmetic Mean	–	–	0.030 ppm	U
Particulate Matter – Small (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N	–	–
	24-Hour	50 µg/m^3	N	150 µg/m^3	U
Particulate Matter - Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	N	12 µg/m^3	U/A
	24-Hour	–	–	35 µg/m^3	N
Sulfates	24-Hour	25 µg/m^3	A	–	–

Pollutant	Averaging Time	California Ambient Air Quality Standards		National Ambient Air Quality Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Lead	Calendar Quarter	–	–	1.5 µg/m^3	A
	Rolling 3-Month Average	–	–	0.15 µg/m^3	U
	30-Day Average	1.5 µg/m^3	A	–	–
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	U	–	–
Vinyl Chloride (Chloroethene)	24-Hour	0.010 ppm (26 µg/m^3)	No information available	–	–
Visibility Reducing Particles	8-Hour (10:00 to 18:00 PST)	–	U	–	–

A = attainment; N = nonattainment; U = unclassified; ppm=parts per million; µg/m^3=micrograms per cubic meter; PST = Pacific Standard Time

Source: BAAQMD 2017b and U.S. EPA 2020a

Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified, which means insufficient monitoring data are available; unclassified areas are considered to be in attainment. Table 2 presents the attainment status of the SFBAAB for each of the CAAQS and NAAQS. As shown therein, the SFBAAB is designated nonattainment for the NAAQS for ozone and $PM_{2.5}$ and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Regional

As the local air quality management agency, the BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the region is in non-compliance.

The BAAQMD 2017 Clean Air Plan (2017 Plan; titled *Spare the Air: Cool the Climate – A Blueprint for Clean Air and Climate Protection in the Bay Area*) provides a plan to improve Bay Area air quality and protect public health as well as the climate. The legal impetus for the 2017 Clean Air Plan is to update the most recent ozone plan, the 2010 Clean Air Plan, to comply with state air quality planning requirements as codified in the California Health and Safety Code. Although steady progress has been made toward reducing ozone levels in the Bay Area, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. The 2017 Plan, which focuses on protecting public health and the climate, defines an integrated, multi-pollutant control strategy that includes all feasible measures to reduce emissions of ozone precursors (including transport of ozone and its precursors to neighboring air basins), PM, and TACs. To protect public health, the control strategy will decrease population exposure to PM and TACs in communities that are most impacted by air pollution with the goal of eliminating disparities in exposure to air pollution between communities. The control strategy will also protect the climate by reducing greenhouse gas (GHG) emissions and developing a long-range

vision of how the Bay Area could look and function in a post-carbon economy in 2050 (BAAQMD 2017c).

Local

One of the Guiding Principles of the Los Altos General Plan Natural Environment and Hazards Element (adopted in November 2002) is to "to protect the community from injury, loss of life, property damage, and deteriorating quality of life resulting from natural hazards and hazards relating to human activity." This includes the protection of the community from air pollutants degrading air quality and posing a significant health hazard through compliance with requirements of the BAAQMD (City of Los Altos 2002). The general plan consists of the following goal applicable to air quality:

Goal 8: Maintain or improve air quality in Los Altos.

Policy 8.1: Support the principles of reducing air pollutants through land use, transportation, and energy use planning.

Policy 8.2: Encourage transportation modes that minimize contaminant emissions from motor vehicle use.

Policy 8.3: Interpret and implement the General Plan to be consistent with the regional Bay Area Air Quality Management Plan, as periodically updated.

Policy 8.4: Ensure location and design of development projects so as to conserve air quality and minimize direct and indirect emissions of air contaminants.

2.4 Current Air Quality

The BAAQMD operates a network of air quality monitoring stations throughout the SFBAAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and to determine whether ambient air quality meets the California and federal standards. The monitoring station closest to the project is the San José-Jackson Street station located at 158 Jackson Street in San José, approximately 12.3 miles southeast of the project site. Table 3 indicates the number of days that each of the federal and state standards has been exceeded at this station in each of the last three years. The data indicate the one-hour ozone CAAQS and NAAQS and the eight-hour ozone CAAQS were exceeded in 2017 and 2019. In addition, the CAAQS for PM_{10} was each year from 2017 to 2019, while the NAAQS for $PM_{2.5}$ was exceeded in 2017 and 2018. No other state or federal standards were exceeded at this monitoring station.

Table 3 Annual Ambient Air Quality Data

Pollutant	2017	2018	2019
Ozone (ppm), Worst 1-Hour[1]	0.121	0.078	0.095
Number of days above CAAQS (>0.09 ppm)	3	0	1
Number of days above NAAQS (>0.12 ppm)	0	0	0
Ozone (ppm), Worst 8-Hour Average[1]	0.098	0.061	0.081
Number of days above CAAQS (>0.070 ppm)	4	0	2
Number of days above NAAQS (>0.070 ppm)	3	0	1
Carbon Monoxide (ppm), Highest 8-Hour Average[2]	1.8	2.1	1.3
Number of days above CAAQS or NAAQS (>9.0 ppm)	0	0	0
Nitrogen Dioxide (ppm), Worst 1-Hour[1]	0.0675	0.0861	0.0598
Number of days above CAAQS (>0.180 ppm)	0	0	0
Number of days above NAAQS (>0.100 ppm)	0	0	0
Sulfur Dioxide (ppm), Worst Hour[2]	0.0036	0.0069	0.014
Number of days above CAAQS (>0.25 ppm)	0	0	0
Number of days above NAAQS (>0.075 ppm)	0	0	0
Particulate Matter <10 microns ($\mu g/m^3$), Worst 24 Hours[2]	69.4	155.4	75.4
Number of days above CAAQS (>50 $\mu g/m^3$)	6	4	4
Number of days above NAAQS (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns ($\mu g/m^3$), Worst 24 Hours[1]	49.7	133.9	27.6
Number of days above NAAQS (>35 $\mu g/m^3$)	6	15	0
Lead ($\mu g/m^3$), 3-Month Average[2]	0.010	0.006	0.012
Number of days above NAAQS (>0.15 $\mu g/m^3$)	0	0	0

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard

[1] Data sourced from the CARB and the U.S. EPA at the nearest monitoring station with available data at the 158 Jackson Street station in San José.

[2] Data sourced from the U.S. EPA at the nearest monitoring station with available data at the 158 Jackson Street station in San José

Source: CARB 2020b and U.S. EPA 2020b

2.5 Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; people engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, the majority of sensitive receptor locations are schools, hospitals, and residences. Sensitive receptors in the project vicinity include multi-family residences located immediately north of the project site as well as Saint Nicholas Catholic Church located approximately 260 feet west of the project site.

3 Impact Analysis

3.1 Methodology

Criteria Air Pollutant Emissions

The analysis of air quality impacts considers the effects of both temporary construction-related air quality impacts and long-term air quality impacts associated with operation of the project. The project's construction-related air pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., condo/townhouse, enclosed parking structure), and location, to estimate a project's construction emissions. As discussed further under *Project Impacts*, operational emissions were screened out from further analysis using the BAAQMD screening criteria; therefore, operational air pollutant emissions were not modeled. Complete CalEEMod results and assumptions are provided in Attachment 1.

Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. The construction schedule, list of construction equipment, soil export volume, demolition square footage, haul trip distances, and vehicle speeds on unpaved roads were based on applicant-provided data. In addition, it was assumed that project construction would comply with all applicable regulatory standards, including BAAQMD Regulation 8, Rule 3 (Architectural Coatings), which restricts the volatile organic compound content of flat coatings to 100 grams per liter and non-flat coatings to 150 grams per liter.

Toxic Air Contaminants

BAAQMD provides community risk and hazards screening tools for agencies to use in deciding whether there should be further environmental review of a project based on its exposure to TAC emissions. According to the BAAQMD, the screening tools provide conservative estimates. A more refined analysis, including site-specific dispersion modeling, should be conducted for more accurate (and usually lower) risk and hazard estimates (BAAQMD 2012). The screening tools provide estimates for $PM_{2.5}$ concentrations, cancer risk, chronic hazard risk, and acute hazard risk from stationary, roadway, and highway sources. The risk and hazard screening analysis process include the following steps:

1. **Source Identification.** Identify emissions sources (permitted sources, highways, major roadways, and railways) within 1,000 feet of the project's fence-line. If there are no sources within 1,000 feet of the project's fence-line, then the potential for unacceptable cancer risk and health hazards are low, and no further analysis is necessary. If emissions sources exist within 1,000 feet of the project's fence-line, the analysis should conduct initial screening.
2. **Initial Screening.** Initial screening compares each source's estimated cancer risk, $PM_{2.5}$, and hazard values to applicable thresholds. The screening tools allow the summation all of the sources' impacts for comparison to cumulative thresholds. If the risk and hazard estimates for an individual source and/or the cumulative levels are below BAAQMD's thresholds, then the potential for unacceptable cancer risks and or health hazards are low, and no further analysis is

necessary. If estimated levels exceed the BAAQMD thresholds, then the analysis should conduct advanced screening.

3. **Advanced Screening.** Advanced screening scales the highway and roadway risk and $PM_{2.5}$ values to reflect actual traffic and distances from the project's fence-line. If the refined risk and hazard estimates are below applicable thresholds, then the potential for unacceptable cancer risk and health hazards are low, and no further analysis is necessary. If the estimated levels exceed the BAAQMD thresholds, then the analysis should conduct refined modeling.
4. **Refined Modeling Analysis.** Refined modeling analysis uses local traffic and meteorology data to model cancer risks and health hazards. If the risk and hazard estimates with refined modeling are below BAAQMD's thresholds, then the potential for unacceptable cancer risks and chronic health hazards are low, and no further analysis is needed. If thresholds are exceeded, then risk reduction strategies should be implemented.

One permitted emission source was identified within 1,000 feet of the project's fence line using BAAQMD's Stationary Source Screening Analysis Tool (BAAQMD 2020a). This source is a gasoline dispensing facility (ID: 100829) located approximately 885 feet northeast of the project site at Los Altos 76.

No highways or railways are within 1,000 feet of the project site. The only major roadway in the project vicinity is Foothill Expressway, which is adjacent to the project site. As of 2017, average daily traffic volumes on the segment of Foothill Expressway adjacent to the project site were approximately 2,232 vehicles during the AM peak hour, or approximately 22,230 vehicles per day using an industry standard assumption that 10 percent of ADT is peak hour traffic (Hexagon Transportation Consultants, Inc. 2017). Raster data provided by BAAQMD for Major Roadways in Santa Clara County was used to determine cancer risk, hazard index, and $PM_{2.5}$ annual average concentration for Sonoma Boulevard based on the annual average daily traffic (AADT) and distance from the project site to the edge of the highway (Flores 2020).

3.2 Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the CEQA Guidelines recommends consideration of whether a project would:

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

This analysis uses the numeric thresholds in the May 2017 *BAAQMD CEQA Air Quality Guidelines* to determine whether the impacts of the project exceed the thresholds identified in Appendix G of the CEQA Guidelines. The BAAQMD has developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts. If all the screening criteria are met by a project, the lead agency or applicant does not need to perform a detailed air quality assessment of the project's air pollutant emissions, and air quality impacts would be considered less than significant. These screening levels

are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. For infill projects such as the proposed project, emissions would be less than the greenfield-type project on which the screening criteria are based; therefore, use of the screening criteria is a conservative approach (BAAQMD 2017a). The BAAQMD's screening level sizes for general condo/townhomes are 240 dwelling units for construction-related criteria pollutant emissions and 451 dwelling units for operational criteria pollutant emissions (BAAQMD 2017a).

In addition, for construction-related emissions to be considered less than significant, projects must meet the following criteria in addition to being below the applicable screening level (BAAQMD 2017a):

1. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
2. Construction-related activities would not include any of the following:
    - Demolition;
    - Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would not occur simultaneously);
    - Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high-density infill development);
    - Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
    - Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The project meets the criteria for use of the operational screening size for criteria pollutant emissions; therefore, this analysis utilizes the screening size process to evaluate the significance of the project's operational criteria pollutant emissions. However, the project does not include implementation of all Basic Construction Mitigation Measures and would involve demolition of the existing land uses. In addition, multiple construction phases would occur simultaneously during construction activities. Therefore, the project does not meet all of the screening criteria for construction emissions. For projects that do not meet the screening criteria, BAAQMD provides numeric significance thresholds. Table 4 presents the BAAQMD quantitative significance thresholds for construction-related criteria air pollutant and precursor emissions. These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the SFBAAB's existing air quality conditions. The proposed project would result in a significant impact if construction emissions would exceed any of the thresholds shown in Table 4.

Table 4 Air Quality Thresholds of Significance

Pollutant	Average Daily Emissions (lbs/day)
ROG	54
NOX	54
PM_{10}	82 (exhaust)
$PM_{2.5}$	54 (exhaust)
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices

ROG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particulate matter 10 microns in diameter or less, $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; lbs/day = pounds per day, BAAQMD = Bay Area Air Quality Management District

Source: BAAQMD 2017a

The BAAQMD also provides a preliminary screening methodology to conservatively determine whether a proposed project would potentially result in a significant impact related to localized CO concentrations. If the following criteria are met, a project would result in a less-than-significant impact:

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

The BAAQMD has established the following thresholds of significance for local community risks and hazards associated with toxic air contaminants (TACs) and $PM_{2.5}$ for assessing individual project-level impacts at a local level (BAAQMD 2017a):

- Not to exceed an increased cancer risk of >10 in one million
- Not to exceed increased non-cancer (i.e., Chronic or Acute) risk of >1.0 Hazard Index
- Not to exceed ambient $PM_{2.5}$ concentration increase of >0.3 micrograms per cubic meter ($\mu g/m^3$) annual average

A project would have a cumulatively considerable impact related to local community risks and hazards associated with TACs and $PM_{2.5}$ if the aggregate total of current and proposed TAC sources within a 1,000 feet radius of the project fence line in addition to the proposed project would exceed the following thresholds of significance (BAAQMD 2017a):

- Not to exceed an increased cancer risk of >100 in one million
- Not to exceed increased non-cancer (i.e., Chronic or Acute) risk of >10 Hazard Index
- Not to exceed ambient $PM_{2.5}$ concentration increase >0.8 $\mu g/m^3$ annual average

3.3 Project Impacts

Threshold 1	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 THE PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE 2017 CLEAN AIR PLAN. NO IMPACT WOULD OCCUR.

The California Clean Air Act requires air districts to create a Clean Air Plan that describes how the jurisdiction will meet air quality standards. These plans must be updated every three years. The most recently adopted air quality plan for the SFBAAB is the 2017 Clean Air Plan. To fulfill State ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NO_X]) and reduce the transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Clean Air Plan builds upon and enhances BAAQMD's efforts to reduce emissions of $PM_{2.5}$ and toxic air contaminants (TACs). The 2017 Clean Air Plan does not include control measures that apply directly to individual development projects. Instead, the control strategy includes measures related to stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-greenhouse gas pollutants (BAAQMD 2017c).

The 2017 Clean Air Plan focuses on two paramount goals (BAAQMD 2017c):

- Protect air quality and health at the regional and local scale by attaining all state and national air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs; and
- Protect the climate by reducing Bay Area greenhouse gas 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 Clean Air Plan should demonstrate that a project (BAAQMD 2017a):

- Supports the primary goals of the 2017 Clean Air Plan;
- Includes applicable control measures from the 2017 Clean Air Plan; and
- Would not disrupt or hinder implementation of any control measures in the 2017 Clean Air Plan.

A project that would not support the 2017 Clean Air Plan's goals would not be considered consistent with the plan. On an individual project basis, consistency with BAAQMD's quantitative thresholds is interpreted as demonstrating support for the 2017 Clean Air Plan's goals. As shown in the later discussions under Impact AQ-2 and AQ-3, the project would not result in exceedances of BAAQMD's thresholds for criteria air pollutants and thus would not conflict with the 2017 Clean Air Plan's goal to attain air quality standards. Furthermore, as shown in Table 5, the proposed project would include applicable control measures from the 2017 Clean Air Plan and would not disrupt or hinder implementation of such control measures. Therefore, the proposed project would result in no impact related to consistency with the 2017 Clean Air Plan.

Table 5 Project Consistency with Applicable Control Strategies of 2017 Clean Air Plan

Control Strategy	Evaluation
Direct new development to areas that are well served by transit, and conducive to bicycling and walking.	**Consistent**. The project would be an infill redevelopment project located in the City's Downtown Vision – First Street District (City of Los Altos 2018). The project site is also located within 0.1 mile of the San Antonio Road/Lyell Street bus stop for Santa Clara Valley Transportation Authority's route 40 and is within approximately 1.8 miles of the San Antonio Caltrain station). The project site is located in the Los Altos Priority Development Area, which is one of the neighborhoods identified by *Plan Bay Area 2040* as suitable for additional, compact development in proximity to existing transit (Metropolitan Transportation Commission and Association of Bay Area Governments 2017). The project would also be within walking and bicycling distance of Los Altos Main Street, which includes commercial, retail, restaurant, and entertainment opportunities and is approximately 0.1 mile west of bicycle lanes on South San Antonio Road. Therefore, the project would be located in an area that is well served by transit and conducive to bicycling and walking.
Accelerate the widespread adoption of electric vehicles.	**Consistent.** Of the project's nine parking spaces, eight would be equipped with electric vehicle charging stations. This project feature would promote the adoption of electric vehicles by providing infrastructure to facilitate their use by residents.
Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar, wind and ground-source heat pumps.	**Consistent**. The project would include an approximately 20-kW rooftop solar PV system, which would expand the production of low-carbon, renewable energy.
Promote energy and water efficiency in both new and existing buildings.	**Consistent.** The project would involve the replacement of an existing veterinary clinic with multi-family residences that would be required to comply with 2019 CALGreen standards, which include measures for energy and water efficiency.

Source: BAAQMD 2017c

Threshold 2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?

Impact AQ-2 PROJECT CONSTRUCTION AND OPERATION WOULD RESULT IN THE GENERATION OF CRITERIA AIR POLLUTANTS, WHICH WOULD AFFECT LOCAL AIR QUALITY. HOWEVER, CONSTRUCTION-RELATED EMISSIONS OF CRITERIA AIR POLLUTANTS WOULD NOT EXCEED BAAQMD THRESHOLDS, AND THE PROJECT WOULD FALL BELOW THE BAAQMD OPERATIONAL SCREENING SIZE. THEREFORE, THE PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles in addition to ROG emissions that would be released during the drying phase of architectural coating. Construction would occur over approximately 23 months, and approximately 1,600 cubic yards of material would be exported off site. Table 6 summarizes the estimated maximum daily emissions of pollutants during project construction. As shown therein, construction-

related emissions would not exceed BAAQMD thresholds. Therefore, project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

Table 6 Estimated Daily Construction Emissions

	ROG	NO_X	CO	SO_2	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Maximum Construction Emissions (lbs/day)	2.6	8.9	7.2	<0.1	0.3	0.3
BAAQMD Thresholds	54	54	N/A	N/A	82	54
Threshold Exceeded?	**No**	**No**	**N/A**	**N/A**	**No**	**No**

ROG = reactive organic gases, NO_X = nitrogen oxides, CO = carbon monoxide, SO_2 = sulfur dioxide, PM_{10} = particulate matter measuring 10 microns in diameter or less, $PM_{2.5}$ = particulate matter measuring 2.5 microns or less in diameter; lbs/day = pounds per day, BAAQMD = Bay Area Air Quality Management District

N/A = Not available. The BAAQMD has not established recommended quantitative thresholds for construction-related emissions of CO and SO_2.

Notes: All emissions modeling was completed using CalEEMod in accordance with applicant-provided data. Some numbers may not add up due to rounding. Emissions presented are the highest of the winter and summer modeled emissions.

See Appendix B for model output results.

Although project emissions would not exceed the significance thresholds, the BAAQMD recommends implementing the following Basic Construction Mitigation Measures to reduce emissions of fugitive dust during construction activities (BAAQMD 2017a):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) should be watered two times daily.
- All haul trucks transporting soil, sand, or other loose material off-site should be covered.
- All visible mud or dirt track-out onto adjacent public roads should 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 should be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved should be completed as soon as possible.
- Idling times should be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage should be provided for construction workers at all access points.
- All construction equipment should be maintained and properly tuned in accordance with manufacturer's specifications. All equipment should be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly-visible sign with the telephone number and person to contact at the City of Los Altos regarding dust complaints should be posted. This person should respond and take corrective action within 48 hours. The BAAQMD's phone number should also be visible to ensure compliance with applicable regulations.

Operational Emissions

The BAAQMD operational screening level size for a condos/townhomes (general) is 451 dwelling units. The proposed project includes four dwelling units and therefore is well below the screening size. As a result, per BAAQMD guidance, a detailed air quality assessment of the project's operational criteria air pollutant emissions is not necessary, and project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

Threshold 3	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-3 THE PROPOSED PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL CONCENTRATIONS OF CO OR TACS. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Therefore, the majority of sensitive receptor locations are schools, hospitals, and residences. Sensitive receptors in the project vicinity include multi-family residences located immediately north of the project site as well as Saint Nicholas Catholic Church located approximately 260 feet of the project site. The nearest sensitive receptors are multi-family residences adjacent to the project site's northern boundary. The project also includes the siting of new sensitive receptors. Localized air quality impacts to sensitive receptors typically result from CO hotspots and TACs, which are discussed in the following subsections.

Carbon Monoxide Hotspots

Vehicular traffic associated with project operation could have the potential to contribute to CO hotspots. The BAAQMD recommends comparing project's attributes with the following screening criteria as a first step to evaluating whether the project would result in the generation of CO concentrations that would substantially contribute to an exceedance of its CO thresholds of significance. As stated in the BAAQMD 2017 *CEQA Air Quality Guidelines*, the proposed project would result in a less than significant impact related to local CO concentrations if the project is consistent with an applicable CMP; would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; and 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).

The nearest CMP roadway segments are the segment of Foothill Expressway adjacent to the project site between Interstate 280 and the Santa Clara County line, which currently operates at Level of Service (LOS) E during both peak hours, and the segment of San Antonio Road approximately 0.1 mile to the east of the project site between Charleston Road and Foothill Expressway, which currently operates at LOS D during both peak hours. The nearest CMP intersection is the Foothill Expressway/San Antonio Road intersection located approximately 0.1 mile to the south, which currently operates at LOS E during both peak hours (Santa Clara Valley Transportation Authority 2018). Based on the CalEEMod trip generation estimates, the proposed project would generate approximately 23 vehicle trips on weekdays, 23 vehicle trips on Saturdays, and 19 vehicle trips on

Sundays.[2] According to data provided by the applicant, existing traffic volumes include 126 one-way trips per weekday (70 for appointments, 20 for drop off/pick up, 10 for deliveries, and 26 for employees), 66 one-way trips on Saturdays (30 for appointments, 10 for drop off/pick up, and 26 for employees), and no trips on Sundays. Therefore, the proposed project would result in a net decrease of 103 vehicle trips on weekdays and 43 vehicle trips on Saturdays. Accordingly, the project would decrease traffic on the CMP network and would therefore be consistent with the applicable CMP.

The highest volume intersection that would accommodate project traffic is the Foothill Expressway/San Antonio Road intersection. As of 2017, average daily traffic volumes on the segment of Foothill Expressway adjacent to the project site were approximately 2,232 vehicles during the AM peak hour, or approximately 22,230 vehicles per day using an industry standard assumption that 10 percent of ADT is peak hour traffic (Hexagon Transportation Consultants, Inc. 2017). Therefore, existing traffic does not exceed the 44,000 vehicle-per-hour threshold at this intersection. In addition, as discussed earlier, the proposed project would result in fewer vehicle trips than existing conditions and therefore would result in fewer mobile source CO emissions than under existing conditions. Thus, the project would not expose sensitive receptors to substantial CO concentrations, and no impact would occur.

Toxic Air Contaminants

TACs are defined by California law as air pollutants that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. 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. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2020a) and is therefore the focus of this analysis.

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 23 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, 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 construction activities (i.e., 23 months) is approximately six 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

[2] CalEEMod trip generation rates based on Institute of Traffic Engineers 9th Edition for Condo/Townhouse ITE Code 230

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 2017a).

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during demolition, site preparation and grading activities. These activities would last for approximately 25 days. PM emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less intensive construction equipment. While the maximum DPM emissions associated with demolition, 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. Therefore, project construction would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

Operation

In the Bay Area, there are a number of urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. According to Figure 5-1 of the BAAQMD 2017 *CEQA Air Quality Guidelines*, the project site is not located in an impacted community. Sources of 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 (BAAQMD 2017a). The proposed project does not involve any of these uses. Therefore, the project would not expose sensitive receptors to elevated concentrations of TAC emissions, and no impact would occur.

Threshold 4	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-4 THE PROPOSED PROJECT WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE. NO IMPACT WOULD OCCUR.

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust and during idling. However, these odors would be intermittent and temporary and would cease upon completion. Overall, project construction would not generate objectionable odors affecting a substantial number of people. Construction-related odor impacts would be less than significant.

Table 3-3 in the BAAQMD 2017 *CEQA Air Quality Guidelines* provides screening distances for 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 2017a). Condominiums are not included in this list, and operation of the project would not generate objectionable odors that would affect a substantial number of people. No operational odor impacts would occur.

3.4 Cumulative Impacts

The geographic scope for the cumulative air quality impact analysis is the SFBAAB. Because the SFBAAB is designated non-attainment for the state and federal ozone standards, the state and federal $PM_{2.5}$ standards, and the state PM_{10} standard, there are existing significant cumulative air quality impacts related to these pollutants. As discussed in the BAAQMD 2017 *CEQA Air Quality Guidelines*, "by its very nature, air pollution is largely a cumulative impact…if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions" (BAAQMD 2017a). As discussed under Thresholds 1 through 4, air pollutant emissions generated by the proposed project would not exceed the BAAQMD's thresholds of significance. Therefore, the project's contribution to significant cumulative air quality impacts in the SFBAAB would not be cumulatively considerable.

4 Conclusions

All air quality impacts related to project construction and operation would be less than significant. The project would not conflict with the 2017 Clean Air Plan's goal to attain air quality standards, would include applicable control measures from the 2017 Clean Air Plan, and would not disrupt or hinder implementation of such control measures; therefore, the project would be consistent with the 2017 Clean Air Plan. Project construction and operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard. Project construction and operation would not expose sensitive receptors to substantial pollutant concentrations from CO hotspots and TACs. The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

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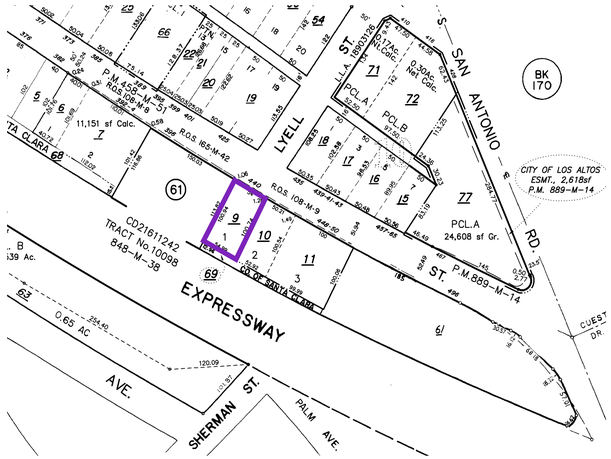
Appendix A

Project Site Plans

PROJECT DESCRIPTION:

This Zoning / Design Review Application is for a new 4 Unit Condominium Development at 440 First St in Los Altos. The proposed building will be three stories of condos over one level of underground parking. The project also proposes improvements to the First St frontage including a new sidewalk. The applicants and design team look forward to working with the city and local stakeholders to create well-designed infill development that is consistent with the vision for future Los Altos.

2 Existing Aerial Context Map



1 Assessors Parcel Map

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Contact: Chris Hall chris@platformarc.com
Contact: Ben Anderson ben@platformarc.com

Civil Engineer:
SMP Civil Engineers-Land Surveyors
1534 Carob Lane
Los Altos, CA 94024
Contact: Saeid Razavi srazavi@smpengineers.com

DRAWING INDEX:

PROJECT DATA:

GENERAL NOTES			
ASSESSORS PARCEL NUMBER	167-41-009		
ZONING	CD/R3		
CONSTRUCTION TYPE	TYPE VA FULLY SPRINKLERED		
LOT SIZE	5,495 sf		
OCCUPANCY (CBC 2016)	R2		
APPLICABLE BUILDING CODE	CBC 2019		
ZONING NOTES CD/R3			
	REQUIRED	PROPOSED	
MAX AVG. BLDG HEIGHT	35' max above average grade	35' max above average grade	
MIN SIDE SETBACK	0'	0'	
MIN FRONT SETBACK	10'	10'	
MIN REAR SETBACK	10'	10'	
MAX COVERAGE	NA	NA	
REQUIRED OFF-ST PARKING	2 SPACES PER UNIT + 1 GUEST PARKING SPACE (4 UNITS) = 9 SPACES REQUIRED		
PROPOSED CONDITIONED FLOOR AREAS			
	GROSS COMMON	GROSS RESIDENTIAL	Totals
1ST LEVEL	+/- 874 sf	+/- 2,778 sf	+/- 3,652 sf
2ND LEVEL	+/- 370 sf	+/- 3,600 sf	+/- 3,970 sf
3RD LEVEL	+/- 384 sf	+/- 3,729 sf	+/- 4,113 sf
TOTAL	+/- 1,628 sf	+/- 10,107 sf	+/- 11,735
PROPOSED UNCONDITIONED FLOOR AREAS			
BASEMENT/PARKING GARAGE	+/- 4,947 sf		
TOTAL	+/- 4,947 sf		
PROPOSED VEHICLE AND BIKE PARKING			
	Spaces		TOTAL
Garage Parking	9 (8 EV spaces)		9
Bike Parking Required	(2) Class 1 & (1) Class 2		3
Bike Parking Proposed	(4) Class 1 & (2) Class 2		6

NOTES:

FIRE SPRINKLERS REQUIRED: An automatic residential fire sprinkler system shall be installed in accordance with National Fire Protection Association's (NFPA) Standard 130
FIRE DEPARTMENT CONNECTION: The fire department connection (FDC) for the structure in support of the sprinkler system shall be installed at the street on the street address side of the building. It shall be located within 100 feet of a public fire hydrant and within ten (10) feet of the main PIV (unless otherwise approved by the Chief due to practical difficulties). FDC's shall be equipped with a minimum of two (2), two-and-one-half (2- 1 /2") inch national standard threaded inlet couplings. Orientation of the FDC shall be such that hose lines may be readily and conveniently attached to the inlets without interference. FDC's shall be painted safety yellow.
WATER SUPPLY REQUIREMENTS: Potable water supplies shall be protected from contamination caused by fire protection water supplies.
A PRIVATE WHARF HYDRANT to be provided for high rise pack connection at the rear yard of building. Access to the rear yard of the building is proposed to be through an access easement provided by the neighboring building at 450 First St.
FIRE ALARM SYSTEM REQUIREMENT: The building shall be provided with a fire alarm system in accordance with CFC #907.2.9
A TWO-WAY COMMUNICATION SYSTEM shall be designed and installed in accordance with NFPA 72 (2016 edition)
CONSTRUCTION SITE FIRE SAFETY: All construction sites must comply with applicable provisions of the CFC Chapter 33 and our Standard Detail and Specification SI-7

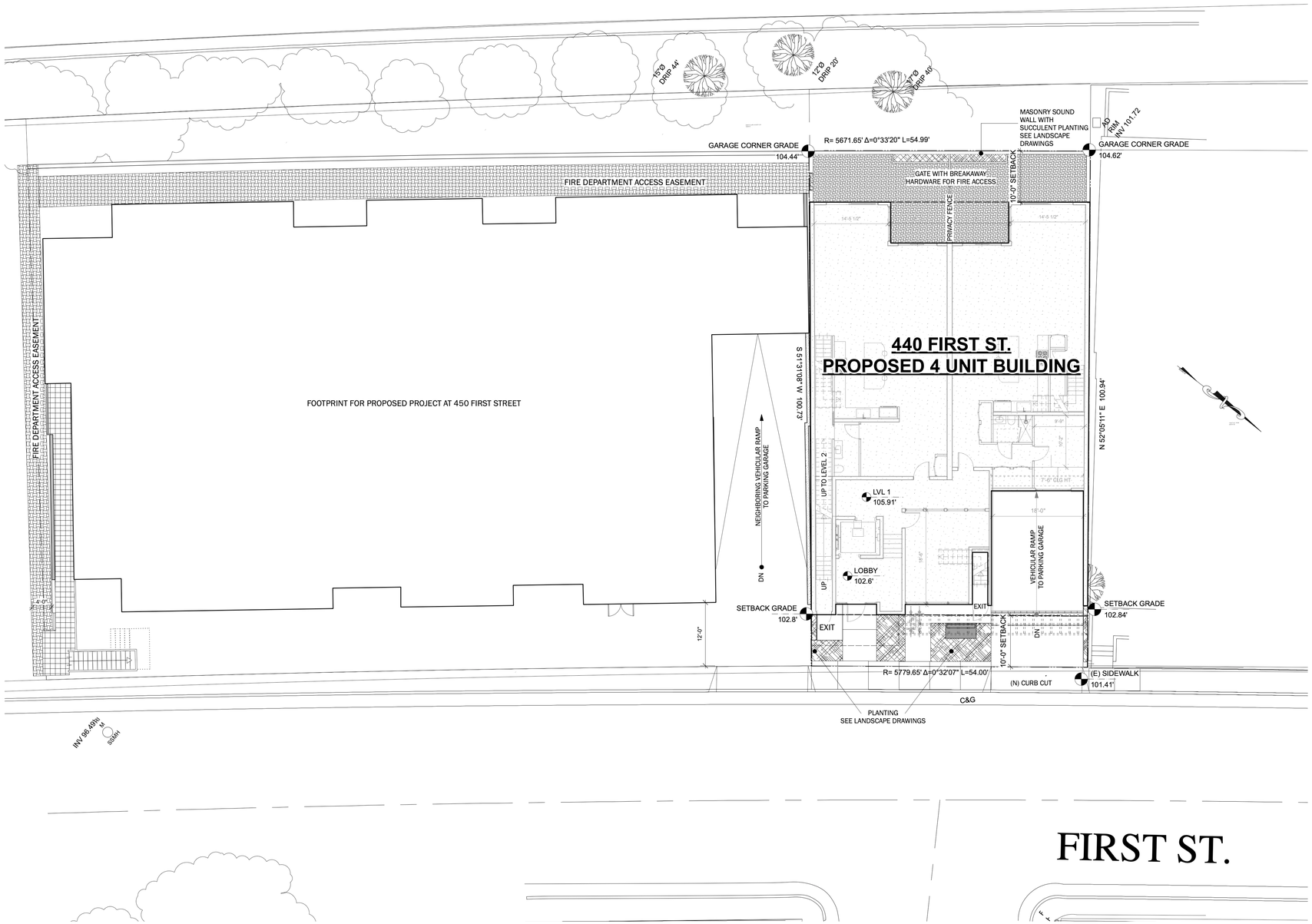
PLATFORM
architecture / planning / research

440 FIRST ST
Los Altos, California

General Notes / Title Page **G-0**

Planning Application Re-Submittal - Nov 23rd 2020

FOOTHIL EXPRESSWAY



0 10 20 30 40 50 60 80'

1" = 10' at full size (36 x 24")

PLATFORM
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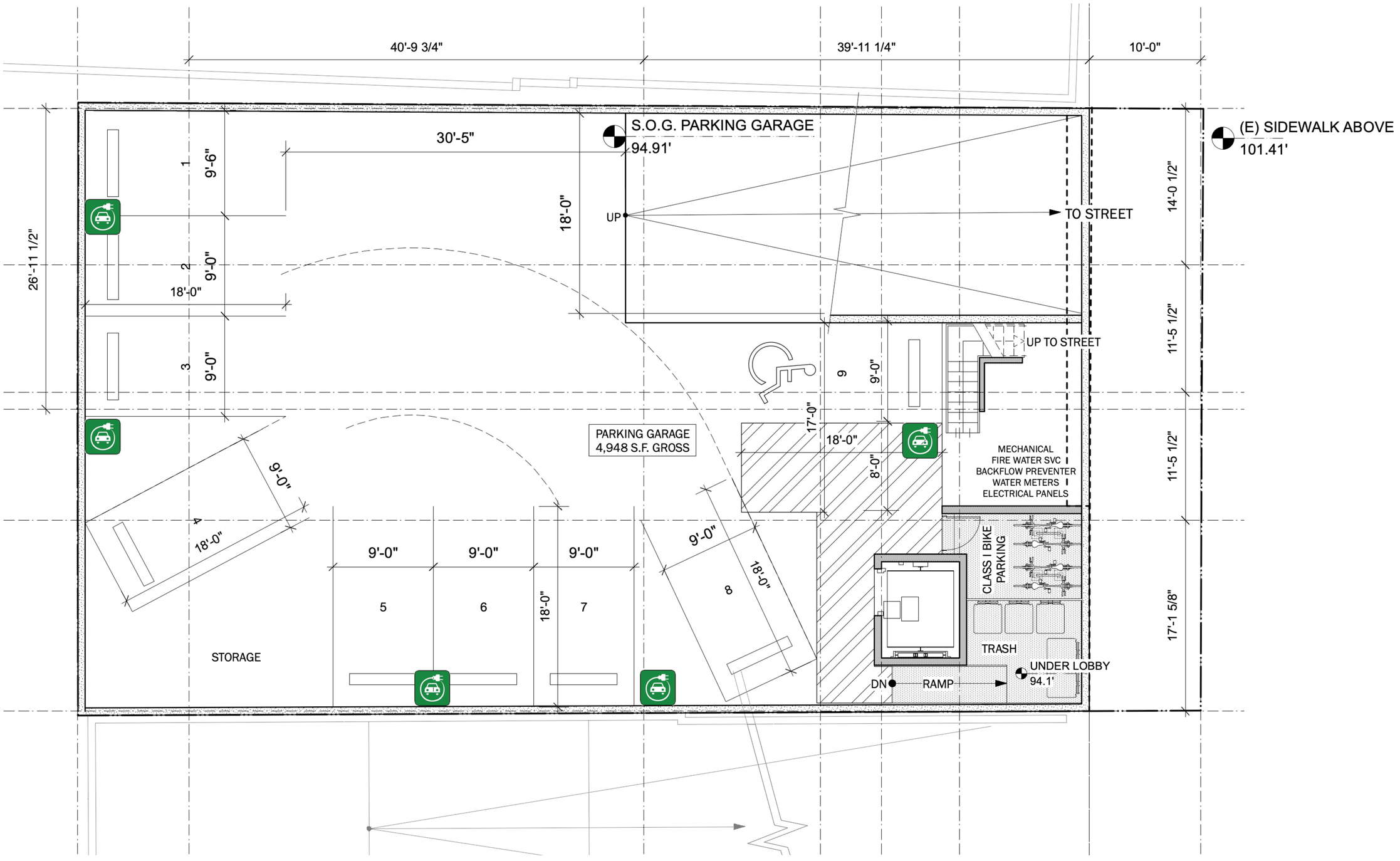
440 FIRST ST

Los Altos, California

Architectural Siteplan **G-4**

Planning Application Re-Submittal - Nov 23rd 2020



0 2 4 8'

1/4" = 1'-0" at full size (36 x 24")

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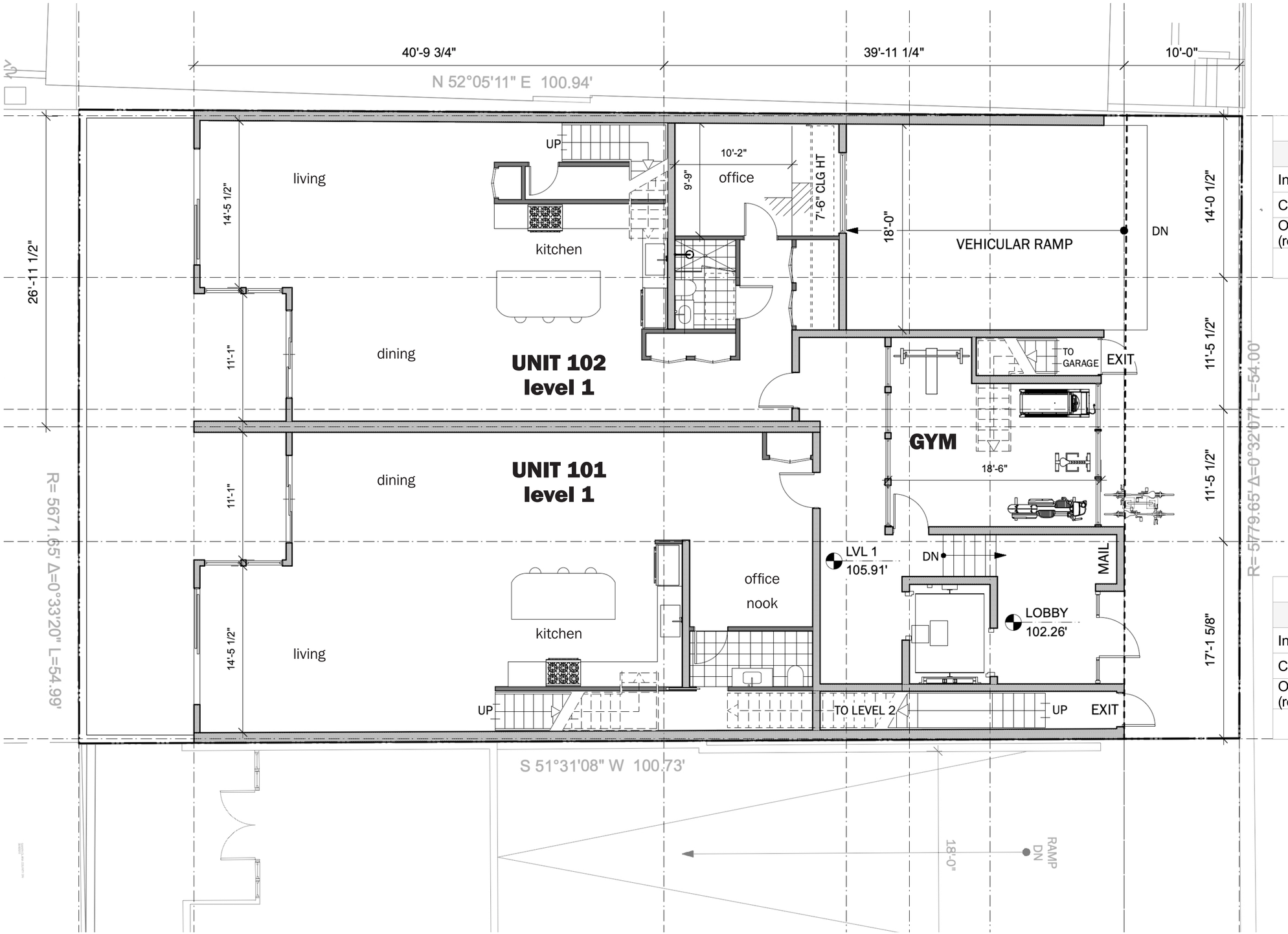
440 FIRST ST

Los Altos, California

Garage / Basement Plan **A-0**

Planning Application Re-Submittal - Nov 23rd 2020



GROSS FLOOR AREAS UNIT 101			
Zone	Level 1	Level 2	Total
Interior	1,384 sf	1,905	**3,289 sf***
Covered Deck	89 sf	200 sf	289 sf
Open Deck (rear yard setback)	270 sf		270 sf
TOTAL GROSS RESIDENTIAL AREA			3,848 sf

GROSS FLOOR AREAS UNIT 102			
Zone	Level 1	Level 2	Total
Interior	1,394 sf	1,695	**3,089 sf***
Covered Deck	89 sf	130 sf	219 sf
Open Deck (rear yard setback)	270 sf		270 sf
TOTAL GROSS RESIDENTIAL AREA			3,578 sf

0 2 4 8'

1/4" = 1'-0" at full size (36 x 24")

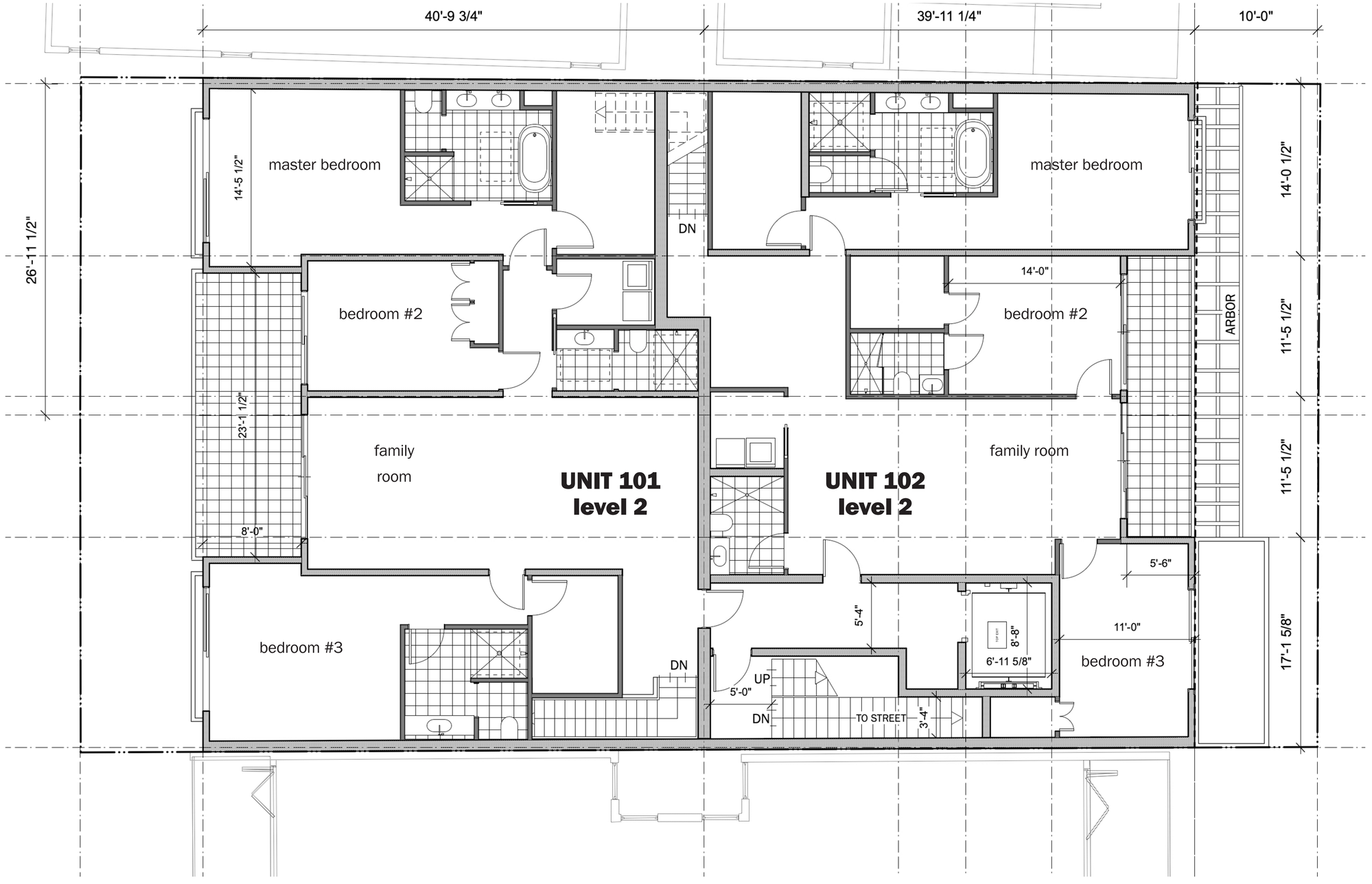
PLATFORM
architecture / planning / research

440 FIRST ST

Los Altos, California

Ground Floor Plan **A-1**

Planning Application Re-Submittal - Nov 23rd 2020



0 2 4 8'

1/4" = 1'-0" at full size (36 x 24")

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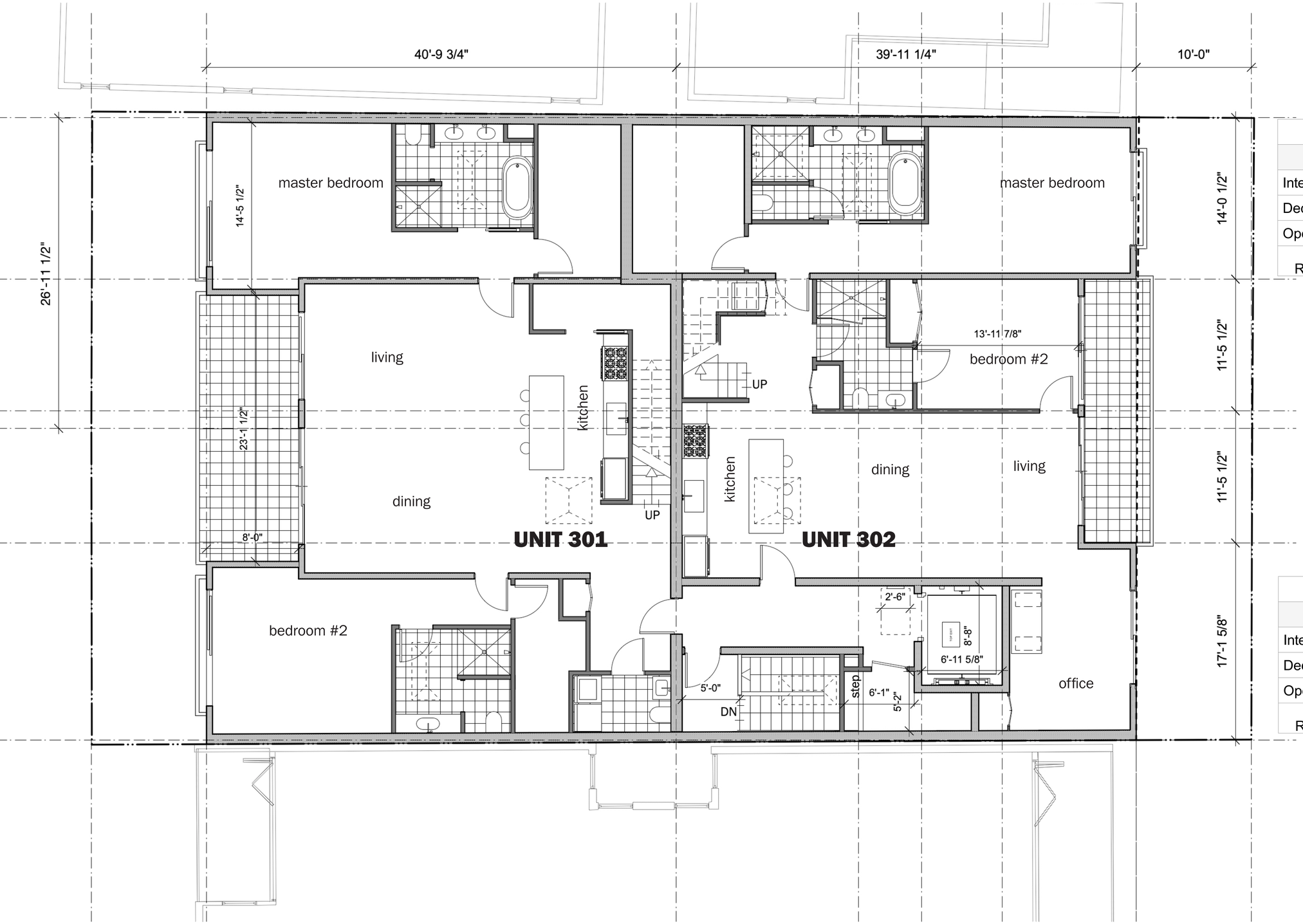
Los Altos, California

2nd Floor Plans **A-2**

Planning Application Re-Submittal - Nov 23rd 2020



GROSS FLOOR AREAS UNIT 301			
Zone	Level 3	Roof	Total
Interior	2,048 sf		**1,985 sf**
Deck w/ trellis Lvl 3	200 sf		200 sf
Open Deck (roof)		366 sf	366 sf
TOTAL GROSS RESIDENTIAL AREA			2,551 sf

GROSS FLOOR AREAS UNIT 302			
Zone	Level 3	Roof	Total
Interior	1,681 sf		**1,743 sf**
Deck w/ trellis Lvl 3	133 sf		133 sf
Open Deck (roof)		360 sf	360 sf
TOTAL GROSS RESIDENTIAL AREA			2,236 sf

0 2 4 8'

1/4" = 1'-0" at full size (36 x 24")

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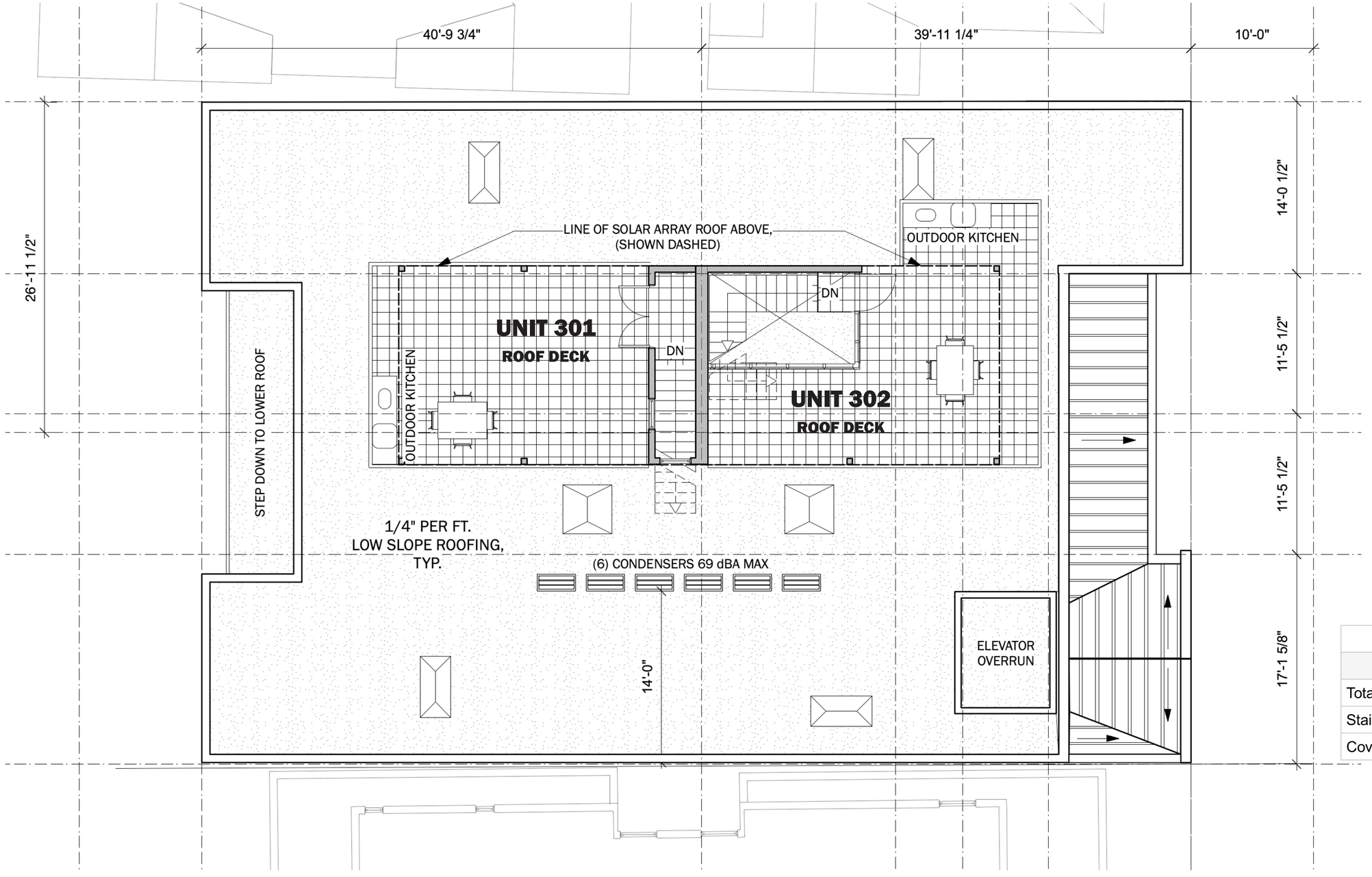
Los Altos, California

3rd Floor Plans **A-3**

Planning Application Re-Submittal - Nov 23rd 2020



ROOF AREAS			
	Area	% OF TOTAL	
Total Roof Area	4,246 sf		-
Stairwell and Elevator	263 sf		7%
Covered Roof Area	617 sf		15%

0 2 4 8'

1/4" = 1'-0" at full size (36 x 24")

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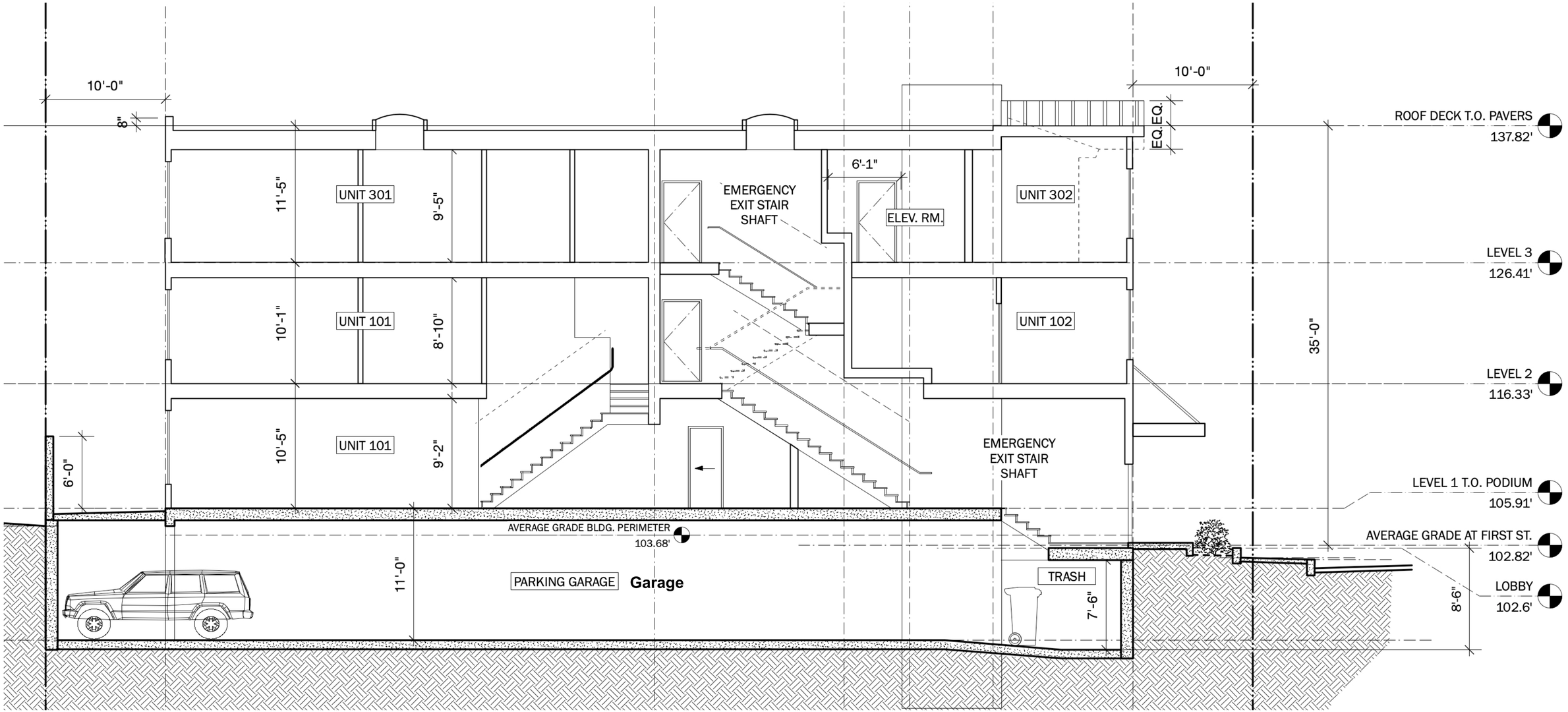
Los Altos, California

4th Floor Roof Deck Plan **A-4**

Planning Application Re-Submittal - Nov 23rd 2020



0 4 8 16'

1/8" = 1'-0" at full size (36 x 24")

PLATFORM
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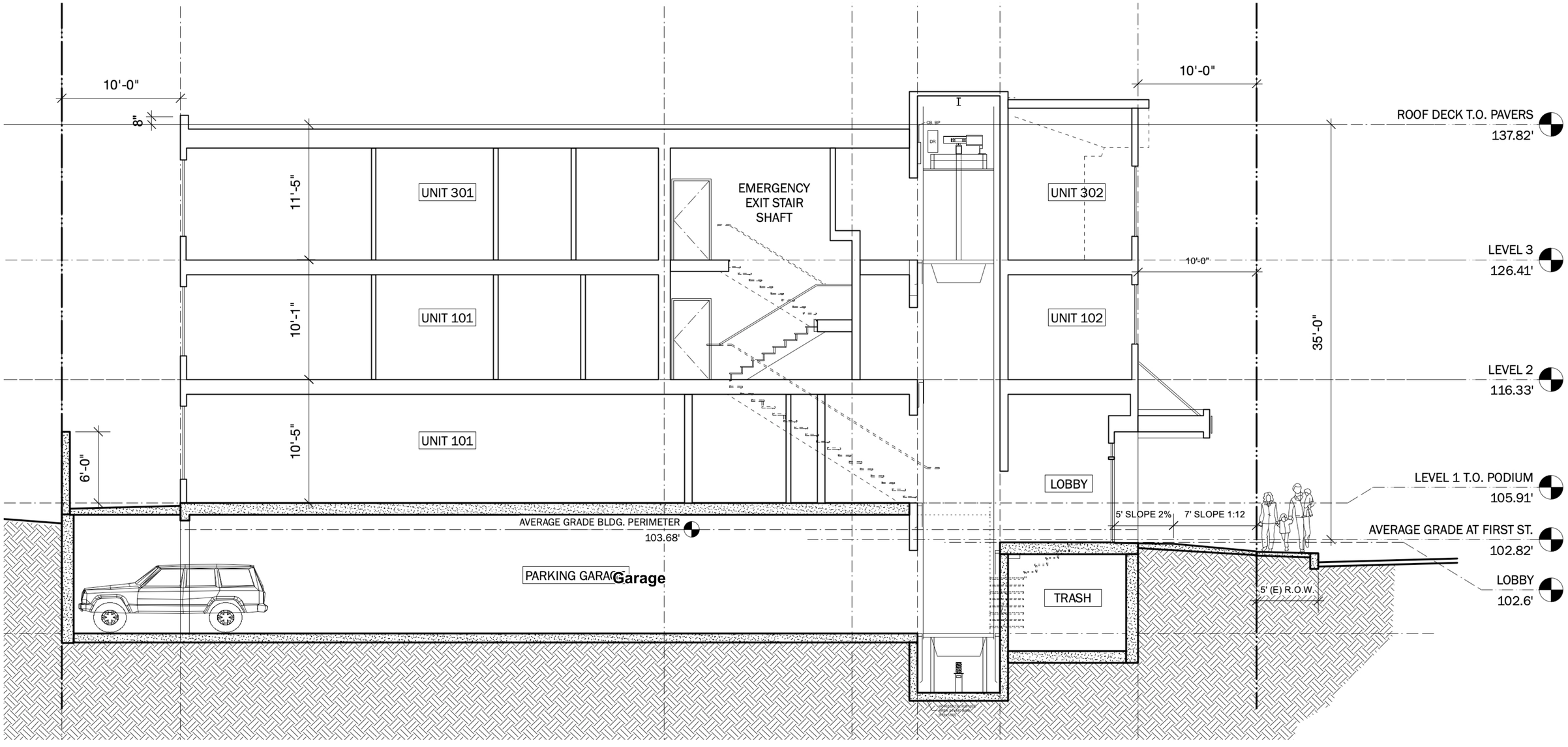
440 FIRST ST

Los Altos, California

Section at Exit Stair **A-9**

Planning Application Re-Submittal - Nov 23rd 2020



0 4 8 16'

1/8" = 1'-0" at full size (36 x 24")

PLATFORM
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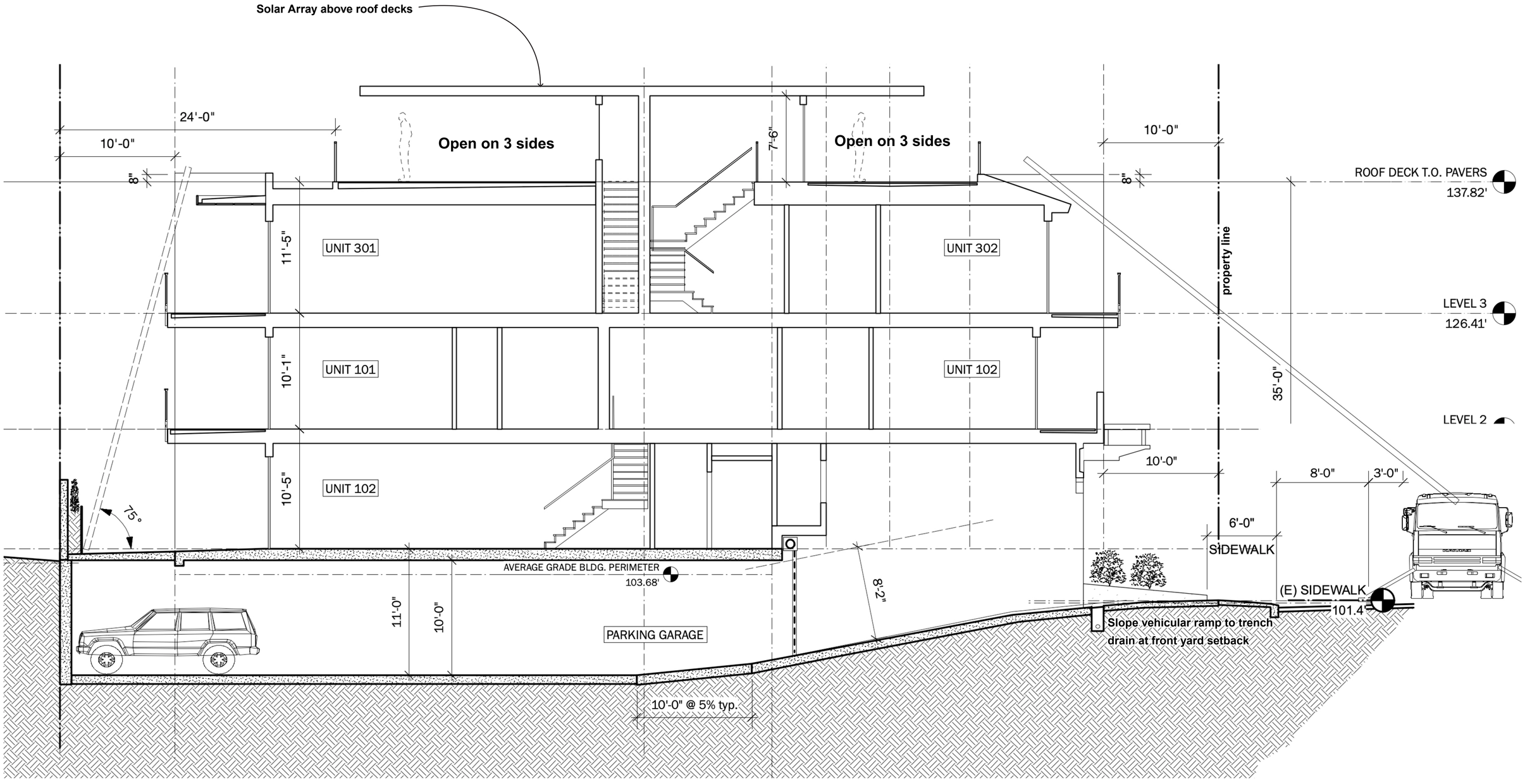
440 FIRST ST

Los Altos, California

Section at Elevator Shaft **A-10**

Planning Application Re-Submittal - Nov 23rd 2020



0 4 8 16'

1/8" = 1'-0" at full size (36 x 24")

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440 FIRST ST

Los Altos, California

Section at Garage Entry Ramp **A-11**

Planning Application Re-Submittal - Nov 23rd 2020

Appendix B

Air Quality and Greenhouse Gas Modeling Results

20-10505 440 1st Street Residential - Proposed Use

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	9.00	Space	0.02	4,947.00	0
Condo/Townhouse	4.00	Dwelling Unit	0.08	11,735.00	11

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.34505939	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.00617

1.3 User Entered Comments & Non-Default Data

20-10505 440 1st Street Residential - Proposed Use - Bay Area AQMD Air District, Winter

Project Characteristics -

Land Use - sf and land use provided by client
lot acreage from APN 187-41-009

Construction Phase - schedule provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment -

Off-road Equipment - provided by client

Trips and VMT - provided by client - Trucks leave from San Jose to Los Altos (Job Site): 15 miles. From Los Altos to Zanker Recycling Center: 12 miles.

Demolition - sf provided by client

Grading - provided by client

Architectural Coating - BAAQMD Regulation 8, Rule 3

Woodstoves - no fireplaces per client

Energy Use -

Mobile Land Use Mitigation - central business district within 0.2 mile
San Antonio station within 1.8 miles

Energy Mitigation - Exceed 7% based on Title 24 2019 Building Standards
On-site renewable energy calculated in solar PV excel spreadsheet - based on client provided information

Water Mitigation - provided by client

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	65.00
tblConstructionPhase	NumDays	100.00	391.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberNoFireplace	0.16	4.00
tblFireplaces	NumberWood	0.68	0.00
tblGrading	MaterialExported	0.00	1,600.00
tblLandUse	LandUseSquareFeet	3,600.00	4,947.00
tblLandUse	LandUseSquareFeet	4,000.00	11,735.00
tblLandUse	LotAcreage	0.08	0.02
tblLandUse	LotAcreage	0.25	0.08
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Building Construction

tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblTripsAndVMT	HaulingTripLength	20.00	14.00
tblTripsAndVMT	HaulingTripLength	20.00	14.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripNumber	8.00	13.00
tblTripsAndVMT	WorkerTripNumber	3.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	23.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.8506	8.8958	7.2221	0.0229	1.3957	0.2878	1.5538	0.2124	0.2692	0.3594	0.0000	2,236.6665	2,236.6665	0.5049	0.0000	2,249.2877
2022	2.6037	3.2062	4.3060	7.3900e-003	0.0478	0.1691	0.2169	0.0128	0.1686	0.1815	0.0000	707.2295	707.2295	0.0651	0.0000	708.8567
Maximum	**2.6037**	**8.8958**	**7.2221**	**0.0229**	**1.3957**	**0.2878**	**1.5538**	**0.2124**	**0.2692**	**0.3594**	**0.0000**	**2,236.6665**	**2,236.6665**	**0.5049**	**0.0000**	**2,249.2877**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.8506	8.8958	7.2221	0.0229	1.3957	0.2878	1.5538	0.2124	0.2692	0.3594	0.0000	2,236.6665	2,236.6665	0.5049	0.0000	2,249.2877
2022	2.6037	3.2062	4.3060	7.3900e-003	0.0478	0.1691	0.2169	0.0128	0.1686	0.1815	0.0000	707.2295	707.2295	0.0651	0.0000	708.8567
Maximum	**2.6037**	**8.8958**	**7.2221**	**0.0229**	**1.3957**	**0.2878**	**1.5538**	**0.2124**	**0.2692**	**0.3594**	**0.0000**	**2,236.6665**	**2,236.6665**	**0.5049**	**0.0000**	**2,249.2877**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Energy	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827
Mobile	0.0288	0.1311	0.3452	1.2200e-003	0.1140	1.0100e-003	0.1150	0.0305	9.4000e-004	0.0315		123.0989	123.0989	4.4200e-003		123.2095
Total	**0.3411**	**0.1654**	**0.6892**	**1.4300e-003**	**0.1140**	**5.3100e-003**	**0.1193**	**0.0305**	**5.2400e-003**	**0.0358**	**0.0000**	**162.6579**	**162.6579**	**5.7400e-003**	**7.1000e-004**	**163.0144**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Energy	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
Mobile	0.0264	0.1161	0.2896	9.6000e-004	0.0879	8.1000e-004	0.0887	0.0235	7.5000e-004	0.0243		96.9553	96.9553	3.7100e-003		97.0480
Total	**0.3386**	**0.1494**	**0.6332**	**1.1600e-003**	**0.0879**	**5.0200e-003**	**0.0930**	**0.0235**	**4.9600e-003**	**0.0285**	**0.0000**	**135.1093**	**135.1093**	**5.0100e-003**	**6.9000e-004**	**135.4395**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.73**	**9.71**	**8.13**	**18.88**	**22.89**	**5.46**	**22.11**	**22.89**	**5.34**	**20.31**	**0.00**	**16.94**	**16.94**	**12.72**	**2.82**	**16.92**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/24/2021	2/26/2021	6	3	
2	Site Preparation	Site Preparation	2/26/2021	2/27/2021	6	2	
3	Grading	Grading	3/1/2021	3/23/2021	6	20	
4	Building Construction	Building Construction	5/3/2021	8/1/2022	6	391	
5	Architectural Coating	Architectural Coating	10/3/2022	12/16/2022	6	65	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 23,763; Residential Outdoor: 7,921; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 297 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Dumpers/Tenders	1	8.00	16	0.38
Demolition	Excavators	1	1.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Dumpers/Tenders	3	8.00	16	0.38
Grading	Excavators	1	1.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Aerial Lifts	1	4.00	63	0.31
Building Construction	Air Compressors	2	6.00	78	0.48
Architectural Coating	Aerial Lifts	1	6.00	63	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	13.00	0.00	9.00	10.80	7.30	14.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	23.00	0.00	160.00	10.80	7.30	14.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6562	0.0000	0.6562	0.0994	0.0000	0.0994			0.0000			0.0000
Off-Road	0.2426	2.1557	2.3550	3.7300e-003		0.1144	0.1144		0.1066	0.1066		349.1394	349.1394	0.0998		351.6331
Total	**0.2426**	**2.1557**	**2.3550**	**3.7300e-003**	**0.6562**	**0.1144**	**0.7706**	**0.0994**	**0.1066**	**0.2060**		**349.1394**	**349.1394**	**0.0998**		**351.6331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0184	0.6492	0.1399	1.7000e-003	0.0367	1.8200e-003	0.0385	0.0101	1.7500e-003	0.0118		182.0971	182.0971	0.0107		182.3642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0302	0.2988	9.5000e-004	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		94.8398	94.8398	2.1500e-003		94.8934
Total	**0.0627**	**0.6794**	**0.4386**	**2.6500e-003**	**0.1435**	**2.4900e-003**	**0.1460**	**0.0384**	**2.3700e-003**	**0.0408**		**276.9369**	**276.9369**	**0.0128**		**277.2576**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6562	0.0000	0.6562	0.0994	0.0000	0.0994			0.0000			0.0000
Off-Road	0.2426	2.1557	2.3550	3.7300e-003		0.1144	0.1144		0.1066	0.1066	0.0000	349.1394	349.1394	0.0998		351.6331
Total	**0.2426**	**2.1557**	**2.3550**	**3.7300e-003**	**0.6562**	**0.1144**	**0.7706**	**0.0994**	**0.1066**	**0.2060**	**0.0000**	**349.1394**	**349.1394**	**0.0998**		**351.6331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0184	0.6492	0.1399	1.7000e-003	0.0367	1.8200e-003	0.0385	0.0101	1.7500e-003	0.0118		182.0971	182.0971	0.0107		182.3642
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0443	0.0302	0.2988	9.5000e-004	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		94.8398	94.8398	2.1500e-003		94.8934
Total	**0.0627**	**0.6794**	**0.4386**	**2.6500e-003**	**0.1435**	**2.4900e-003**	**0.1460**	**0.0384**	**2.3700e-003**	**0.0408**		**276.9369**	**276.9369**	**0.0128**		**277.2576**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0755	1.0035	1.3900	2.0700e-003		0.0408	0.0408		0.0376	0.0376		200.1984	200.1984	0.0648		201.8171
Total	**0.0755**	**1.0035**	**1.3900**	**2.0700e-003**	**0.5303**	**0.0408**	**0.5711**	**0.0573**	**0.0376**	**0.0948**		**200.1984**	**200.1984**	**0.0648**		**201.8171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0755	1.0035	1.3900	2.0700e-003		0.0408	0.0408		0.0376	0.0376	0.0000	200.1984	200.1984	0.0648		201.8171
Total	**0.0755**	**1.0035**	**1.3900**	**2.0700e-003**	**0.5303**	**0.0408**	**0.5711**	**0.0573**	**0.0376**	**0.0948**	**0.0000**	**200.1984**	**200.1984**	**0.0648**		**201.8171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0273	0.0186	0.1839	5.9000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		58.3629	58.3629	1.3200e-003		58.3960
Total	**0.0273**	**0.0186**	**0.1839**	**5.9000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**58.3629**	**58.3629**	**1.3200e-003**		**58.3960**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0500e-003	0.0000	9.0500e-003	1.3700e-003	0.0000	1.3700e-003			0.0000			0.0000
Off-Road	0.7231	7.1113	6.3205	0.0167		0.2818	0.2818		0.2634	0.2634		1,583.2808	1,583.2808	0.4726		1,595.0948
Total	**0.7231**	**7.1113**	**6.3205**	**0.0167**	**9.0500e-003**	**0.2818**	**0.2908**	**1.3700e-003**	**0.2634**	**0.2648**		**1,583.2808**	**1,583.2808**	**0.4726**		**1,595.0948**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0492	1.7312	0.3730	4.5400e-003	0.0979	4.8700e-003	0.1028	0.0268	4.6500e-003	0.0315		485.5923	485.5923	0.0285		486.3046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0783	0.0534	0.5286	1.6800e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		167.7934	167.7934	3.8000e-003		167.8884
Total	**0.1275**	**1.7846**	**0.9016**	**6.2200e-003**	**0.2868**	**6.0600e-003**	**0.2929**	**0.0770**	**5.7500e-003**	**0.0827**		**653.3857**	**653.3857**	**0.0323**		**654.1929**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0500e-003	0.0000	9.0500e-003	1.3700e-003	0.0000	1.3700e-003			0.0000			0.0000
Off-Road	0.7231	7.1113	6.3205	0.0167		0.2818	0.2818		0.2634	0.2634	0.0000	1,583.2808	1,583.2808	0.4726		1,595.0948
Total	**0.7231**	**7.1113**	**6.3205**	**0.0167**	**9.0500e-003**	**0.2818**	**0.2908**	**1.3700e-003**	**0.2634**	**0.2648**	**0.0000**	**1,583.2808**	**1,583.2808**	**0.4726**		**1,595.0948**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0492	1.7312	0.3730	4.5400e-003	0.0979	4.8700e-003	0.1028	0.0268	4.6500e-003	0.0315		485.5923	485.5923	0.0285		486.3046
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0783	0.0534	0.5286	1.6800e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		167.7934	167.7934	3.8000e-003		167.8884
Total	**0.1275**	**1.7846**	**0.9016**	**6.2200e-003**	**0.2868**	**6.0600e-003**	**0.2929**	**0.0770**	**5.7500e-003**	**0.0827**		**653.3857**	**653.3857**	**0.0323**		**654.1929**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	3.3540	4.1821	6.7800e-003		0.1939	0.1939		0.1935	0.1935		644.2060	644.2060	0.0649		645.8292
Total	**0.4565**	**3.3540**	**4.1821**	**6.7800e-003**		**0.1939**	**0.1939**		**0.1935**	**0.1935**		**644.2060**	**644.2060**	**0.0649**		**645.8292**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2900e-003	0.1042	0.0280	2.7000e-004	6.7700e-003	2.3000e-004	7.0000e-003	1.9500e-003	2.2000e-004	2.1700e-003		28.1627	28.1627	1.4700e-003		28.1994
Worker	0.0170	0.0116	0.1149	3.7000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		36.4768	36.4768	8.3000e-004		36.4975
Total	**0.0203**	**0.1158**	**0.1429**	**6.4000e-004**	**0.0478**	**4.9000e-004**	**0.0483**	**0.0128**	**4.6000e-004**	**0.0133**		**64.6395**	**64.6395**	**2.3000e-003**		**64.6969**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	3.3540	4.1821	6.7800e-003		0.1939	0.1939		0.1935	0.1935	0.0000	644.2060	644.2060	0.0649		645.8292
Total	**0.4565**	**3.3540**	**4.1821**	**6.7800e-003**		**0.1939**	**0.1939**		**0.1935**	**0.1935**	**0.0000**	**644.2060**	**644.2060**	**0.0649**		**645.8292**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.2900e-003	0.1042	0.0280	2.7000e-004	6.7700e-003	2.3000e-004	7.0000e-003	1.9500e-003	2.2000e-004	2.1700e-003		28.1627	28.1627	1.4700e-003		28.1994
Worker	0.0170	0.0116	0.1149	3.7000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		36.4768	36.4768	8.3000e-004		36.4975
Total	**0.0203**	**0.1158**	**0.1429**	**6.4000e-004**	**0.0478**	**4.9000e-004**	**0.0483**	**0.0128**	**4.6000e-004**	**0.0133**		**64.6395**	**64.6395**	**2.3000e-003**		**64.6969**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4271	3.0971	4.1742	6.7800e-003		0.1686	0.1686		0.1682	0.1682		644.2060	644.2060	0.0630		645.7797
Total	**0.4271**	**3.0971**	**4.1742**	**6.7800e-003**		**0.1686**	**0.1686**		**0.1682**	**0.1682**		**644.2060**	**644.2060**	**0.0630**		**645.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.0600e-003	0.0987	0.0263	2.6000e-004	6.7700e-003	2.0000e-004	6.9700e-003	1.9500e-003	1.9000e-004	2.1400e-003		27.8839	27.8839	1.4000e-003		27.9189
Worker	0.0159	0.0104	0.1054	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1396	35.1396	7.4000e-004		35.1581
Total	**0.0190**	**0.1091**	**0.1318**	**6.1000e-004**	**0.0478**	**4.5000e-004**	**0.0483**	**0.0128**	**4.2000e-004**	**0.0133**		**63.0235**	**63.0235**	**2.1400e-003**		**63.0770**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4271	3.0971	4.1742	6.7800e-003		0.1686	0.1686		0.1682	0.1682	0.0000	644.2060	644.2060	0.0630		645.7797
Total	**0.4271**	**3.0971**	**4.1742**	**6.7800e-003**		**0.1686**	**0.1686**		**0.1682**	**0.1682**	**0.0000**	**644.2060**	**644.2060**	**0.0630**		**645.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.0600e-003	0.0987	0.0263	2.6000e-004	6.7700e-003	2.0000e-004	6.9700e-003	1.9500e-003	1.9000e-004	2.1400e-003		27.8839	27.8839	1.4000e-003		27.9189
Worker	0.0159	0.0104	0.1054	3.5000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		35.1396	35.1396	7.4000e-004		35.1581
Total	**0.0190**	**0.1091**	**0.1318**	**6.1000e-004**	**0.0478**	**4.5000e-004**	**0.0483**	**0.0128**	**4.2000e-004**	**0.0133**		**63.0235**	**63.0235**	**2.1400e-003**		**63.0770**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0271	0.4202	0.8205	1.2600e-003		7.8000e-003	7.8000e-003		7.1700e-003	7.1700e-003		121.9649	121.9649	0.0395		122.9510
Total	**2.6005**	**0.4202**	**0.8205**	**1.2600e-003**		**7.8000e-003**	**7.8000e-003**		**7.1700e-003**	**7.1700e-003**		**121.9649**	**121.9649**	**0.0395**		**122.9510**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.1800e-003	2.0800e-003	0.0211	7.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.0279	7.0279	1.5000e-004		7.0316
Total	**3.1800e-003**	**2.0800e-003**	**0.0211**	**7.0000e-005**	**8.2100e-003**	**5.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.0279**	**7.0279**	**1.5000e-004**		**7.0316**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0271	0.4202	0.8205	1.2600e-003		7.8000e-003	7.8000e-003		7.1700e-003	7.1700e-003	0.0000	121.9649	121.9649	0.0395		122.9510
Total	**2.6005**	**0.4202**	**0.8205**	**1.2600e-003**		**7.8000e-003**	**7.8000e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**121.9649**	**121.9649**	**0.0395**		**122.9510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	3.1800e-003	2.0800e-003	0.0211	7.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.0279	7.0279	1.5000e-004		7.0316
Total	**3.1800e-003**	**2.0800e-003**	**0.0211**	**7.0000e-005**	**8.2100e-003**	**5.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.0279**	**7.0279**	**1.5000e-004**		**7.0316**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0264	0.1161	0.2896	9.6000e-004	0.0879	8.1000e-004	0.0887	0.0235	7.5000e-004	0.0243		96.9553	96.9553	3.7100e-003		97.0480
Unmitigated	0.0288	0.1311	0.3452	1.2200e-003	0.1140	1.0100e-003	0.1150	0.0305	9.4000e-004	0.0315		123.0989	123.0989	4.4200e-003		123.2095

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	23.24	22.68	19.36	52,210	40,262
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	23.24	22.68	19.36	52,210	40,262

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749
Enclosed Parking with Elevator	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
NaturalGas Unmitigated	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	205.184	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2100e-003**	**0.0189**	**8.0500e-003**	**1.2000e-004**		**1.5300e-003**	**1.5300e-003**		**1.5300e-003**	**1.5300e-003**		**24.1393**	**24.1393**	**4.6000e-004**	**4.4000e-004**	**24.2827**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	0.193241	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0800e-003**	**0.0178**	**7.5800e-003**	**1.1000e-004**		**1.4400e-003**	**1.4400e-003**		**1.4400e-003**	**1.4400e-003**		**22.7343**	**22.7343**	**4.4000e-004**	**4.2000e-004**	**22.8693**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Unmitigated	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2529					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3600e-003	0.0116	4.9400e-003	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	14.8235	14.8235	2.8000e-004	2.7000e-004	14.9116
Landscaping	0.0100	3.8100e-003	0.3310	2.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003		0.5962	0.5962	5.8000e-004		0.6106
Total	**0.3101**	**0.0154**	**0.3359**	**9.0000e-005**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**15.4197**	**15.4197**	**8.6000e-004**	**2.7000e-004**	**15.5222**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2529					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3600e-003	0.0116	4.9400e-003	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	14.8235	14.8235	2.8000e-004	2.7000e-004	14.9116
Landscaping	0.0100	3.8100e-003	0.3310	2.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003		0.5962	0.5962	5.8000e-004		0.6106
Total	**0.3101**	**0.0154**	**0.3359**	**9.0000e-005**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**15.4197**	**15.4197**	**8.6000e-004**	**2.7000e-004**	**15.5222**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

20-10505 440 1st Street Residential - Proposed Use

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	9.00	Space	0.02	4,947.00	0
Condo/Townhouse	4.00	Dwelling Unit	0.08	11,735.00	11

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.34505939	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.00617

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - sf and land use provided by client
lot acreage from APN 187-41-009

Construction Phase - schedule provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment - provided by client

Off-road Equipment -

Off-road Equipment - provided by client

Trips and VMT - provided by client - Trucks leave from San Jose to Los Altos (Job Site): 15 miles. From Los Altos to Zanker Recycling Center: 12 miles.

Demolition - sf provided by client

Grading - provided by client

Architectural Coating - BAAQMD Regulation 8, Rule 3

Woodstoves - no fireplaces per client

Energy Use -

Mobile Land Use Mitigation - central business district within 0.2 mile
San Antonio station within 1.8 miles

Energy Mitigation - Exceed 7% based on Title 24 2019 Building Standards
On-site renewable energy calculated in solar PV excel spreadsheet - based on client provided information

Water Mitigation - provided by client

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	65.00
tblConstructionPhase	NumDays	100.00	391.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	NumDaysWeek	5.00	6.00

tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberNoFireplace	0.16	4.00
tblFireplaces	NumberWood	0.68	0.00
tblGrading	MaterialExported	0.00	1,600.00
tblLandUse	LandUseSquareFeet	3,600.00	4,947.00
tblLandUse	LandUseSquareFeet	4,000.00	11,735.00
tblLandUse	LotAcreage	0.08	0.02
tblLandUse	LotAcreage	0.25	0.08
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Architectural Coating
tblOffRoadEquipment	PhaseName		Building Construction

tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblTripsAndVMT	HaulingTripLength	20.00	14.00
tblTripsAndVMT	HaulingTripLength	20.00	14.00
tblTripsAndVMT	HaulingTripNumber	0.00	160.00
tblTripsAndVMT	WorkerTripNumber	8.00	13.00
tblTripsAndVMT	WorkerTripNumber	3.00	8.00
tblTripsAndVMT	WorkerTripNumber	18.00	23.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.8445	8.8593	7.2239	0.0232	1.3957	0.2877	1.5538	0.2124	0.2691	0.3593	0.0000	2,262.3831	2,262.3831	0.5035	0.0000	2,274.9704
2022	2.6035	3.2035	4.3103	7.4300e-003	0.0478	0.1691	0.2169	0.0128	0.1686	0.1815	0.0000	710.9652	710.9652	0.0650	0.0000	712.5912
Maximum	**2.6035**	**8.8593**	**7.2239**	**0.0232**	**1.3957**	**0.2877**	**1.5538**	**0.2124**	**0.2691**	**0.3593**	**0.0000**	**2,262.3831**	**2,262.3831**	**0.5035**	**0.0000**	**2,274.9704**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.8445	8.8593	7.2239	0.0232	1.3957	0.2877	1.5538	0.2124	0.2691	0.3593	0.0000	2,262.3831	2,262.3831	0.5035	0.0000	2,274.9704
2022	2.6035	3.2035	4.3103	7.4300e-003	0.0478	0.1691	0.2169	0.0128	0.1686	0.1815	0.0000	710.9652	710.9652	0.0650	0.0000	712.5912
Maximum	**2.6035**	**8.8593**	**7.2239**	**0.0232**	**1.3957**	**0.2877**	**1.5538**	**0.2124**	**0.2691**	**0.3593**	**0.0000**	**2,262.3831**	**2,262.3831**	**0.5035**	**0.0000**	**2,274.9704**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Energy	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827
Mobile	0.0334	0.1247	0.3436	1.3000e-003	0.1140	1.0000e-003	0.1150	0.0305	9.4000e-004	0.0314		131.4393	131.4393	4.3400e-003		131.5478
Total	**0.3457**	**0.1590**	**0.6876**	**1.5100e-003**	**0.1140**	**5.3000e-003**	**0.1193**	**0.0305**	**5.2400e-003**	**0.0357**	**0.0000**	**170.9982**	**170.9982**	**5.6600e-003**	**7.1000e-004**	**171.3527**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Energy	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
Mobile	0.0310	0.1113	0.2812	1.0200e-003	0.0879	8.0000e-004	0.0887	0.0235	7.5000e-004	0.0243		103.5841	103.5841	3.5900e-003		103.6739
Total	**0.3432**	**0.1445**	**0.6247**	**1.2200e-003**	**0.0879**	**5.0100e-003**	**0.0929**	**0.0235**	**4.9600e-003**	**0.0285**	**0.0000**	**141.7380**	**141.7380**	**4.8900e-003**	**6.9000e-004**	**142.0655**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.73**	**9.14**	**9.15**	**19.21**	**22.89**	**5.47**	**22.12**	**22.89**	**5.34**	**20.31**	**0.00**	**17.11**	**17.11**	**13.60**	**2.82**	**17.09**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/24/2021	2/26/2021	6	3	
2	Site Preparation	Site Preparation	2/26/2021	2/27/2021	6	2	
3	Grading	Grading	3/1/2021	3/23/2021	6	20	
4	Building Construction	Building Construction	5/3/2021	8/1/2022	6	391	
5	Architectural Coating	Architectural Coating	10/3/2022	12/16/2022	6	65	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.02

Residential Indoor: 23,763; Residential Outdoor: 7,921; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 297 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Dumpers/Tenders	1	8.00	16	0.38
Demolition	Excavators	1	1.00	158	0.38
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Grading	Bore/Drill Rigs	1	8.00	221	0.50
Grading	Dumpers/Tenders	3	8.00	16	0.38
Grading	Excavators	1	1.00	158	0.38
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Aerial Lifts	1	4.00	63	0.31
Building Construction	Air Compressors	2	6.00	78	0.48
Architectural Coating	Aerial Lifts	1	6.00	63	0.31

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	13.00	0.00	9.00	10.80	7.30	14.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	1	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	23.00	0.00	160.00	10.80	7.30	14.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	5.00	1.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6562	0.0000	0.6562	0.0994	0.0000	0.0994			0.0000			0.0000
Off-Road	0.2426	2.1557	2.3550	3.7300e-003		0.1144	0.1144		0.1066	0.1066		349.1394	349.1394	0.0998		351.6331
Total	**0.2426**	**2.1557**	**2.3550**	**3.7300e-003**	**0.6562**	**0.1144**	**0.7706**	**0.0994**	**0.1066**	**0.2060**		**349.1394**	**349.1394**	**0.0998**		**351.6331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.6393	0.1269	1.7400e-003	0.0367	1.7800e-003	0.0385	0.0101	1.7000e-003	0.0118		186.3568	186.3568	0.0101		186.6087
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0418	0.0244	0.3193	1.0300e-003	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		102.9547	102.9547	2.3000e-003		103.0123
Total	**0.0596**	**0.6637**	**0.4462**	**2.7700e-003**	**0.1435**	**2.4500e-003**	**0.1460**	**0.0384**	**2.3200e-003**	**0.0407**		**289.3116**	**289.3116**	**0.0124**		**289.6209**

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6562	0.0000	0.6562	0.0994	0.0000	0.0994			0.0000			0.0000
Off-Road	0.2426	2.1557	2.3550	3.7300e-003		0.1144	0.1144		0.1066	0.1066	0.0000	349.1394	349.1394	0.0998		351.6331
Total	**0.2426**	**2.1557**	**2.3550**	**3.7300e-003**	**0.6562**	**0.1144**	**0.7706**	**0.0994**	**0.1066**	**0.2060**	**0.0000**	**349.1394**	**349.1394**	**0.0998**		**351.6331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.6393	0.1269	1.7400e-003	0.0367	1.7800e-003	0.0385	0.0101	1.7000e-003	0.0118		186.3568	186.3568	0.0101		186.6087
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0418	0.0244	0.3193	1.0300e-003	0.1068	6.7000e-004	0.1075	0.0283	6.2000e-004	0.0290		102.9547	102.9547	2.3000e-003		103.0123
Total	**0.0596**	**0.6637**	**0.4462**	**2.7700e-003**	**0.1435**	**2.4500e-003**	**0.1460**	**0.0384**	**2.3200e-003**	**0.0407**		**289.3116**	**289.3116**	**0.0124**		**289.6209**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0755	1.0035	1.3900	2.0700e-003		0.0408	0.0408		0.0376	0.0376		200.1984	200.1984	0.0648		201.8171
Total	**0.0755**	**1.0035**	**1.3900**	**2.0700e-003**	**0.5303**	**0.0408**	**0.5711**	**0.0573**	**0.0376**	**0.0948**		**200.1984**	**200.1984**	**0.0648**		**201.8171**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.3 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0755	1.0035	1.3900	2.0700e-003		0.0408	0.0408		0.0376	0.0376	0.0000	200.1984	200.1984	0.0648		201.8171
Total	**0.0755**	**1.0035**	**1.3900**	**2.0700e-003**	**0.5303**	**0.0408**	**0.5711**	**0.0573**	**0.0376**	**0.0948**	**0.0000**	**200.1984**	**200.1984**	**0.0648**		**201.8171**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0257	0.0150	0.1965	6.4000e-004	0.0657	4.1000e-004	0.0661	0.0174	3.8000e-004	0.0178		63.3568	63.3568	1.4200e-003		63.3922
Total	**0.0257**	**0.0150**	**0.1965**	**6.4000e-004**	**0.0657**	**4.1000e-004**	**0.0661**	**0.0174**	**3.8000e-004**	**0.0178**		**63.3568**	**63.3568**	**1.4200e-003**		**63.3922**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0500e-003	0.0000	9.0500e-003	1.3700e-003	0.0000	1.3700e-003			0.0000			0.0000
Off-Road	0.7231	7.1113	6.3205	0.0167		0.2818	0.2818		0.2634	0.2634		1,583.2808	1,583.2808	0.4726		1,595.0948
Total	**0.7231**	**7.1113**	**6.3205**	**0.0167**	**9.0500e-003**	**0.2818**	**0.2908**	**1.3700e-003**	**0.2634**	**0.2648**		**1,583.2808**	**1,583.2808**	**0.4726**		**1,595.0948**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0475	1.7048	0.3384	4.6400e-003	0.0979	4.7500e-003	0.1026	0.0268	4.5400e-003	0.0314		496.9516	496.9516	0.0269		497.6231
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0740	0.0432	0.5650	1.8300e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		182.1507	182.1507	4.0700e-003		182.2525
Total	**0.1214**	**1.7481**	**0.9034**	**6.4700e-003**	**0.2868**	**5.9400e-003**	**0.2928**	**0.0770**	**5.6400e-003**	**0.0826**		**679.1023**	**679.1023**	**0.0309**		**679.8756**

3.4 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.0500e-003	0.0000	9.0500e-003	1.3700e-003	0.0000	1.3700e-003			0.0000			0.0000
Off-Road	0.7231	7.1113	6.3205	0.0167		0.2818	0.2818		0.2634	0.2634	0.0000	1,583.2808	1,583.2808	0.4726		1,595.0948
Total	**0.7231**	**7.1113**	**6.3205**	**0.0167**	**9.0500e-003**	**0.2818**	**0.2908**	**1.3700e-003**	**0.2634**	**0.2648**	**0.0000**	**1,583.2808**	**1,583.2808**	**0.4726**		**1,595.0948**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0475	1.7048	0.3384	4.6400e-003	0.0979	4.7500e-003	0.1026	0.0268	4.5400e-003	0.0314		496.9516	496.9516	0.0269		497.6231
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0740	0.0432	0.5650	1.8300e-003	0.1889	1.1900e-003	0.1901	0.0501	1.1000e-003	0.0512		182.1507	182.1507	4.0700e-003		182.2525
Total	**0.1214**	**1.7481**	**0.9034**	**6.4700e-003**	**0.2868**	**5.9400e-003**	**0.2928**	**0.0770**	**5.6400e-003**	**0.0826**		**679.1023**	**679.1023**	**0.0309**		**679.8756**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	3.3540	4.1821	6.7800e-003		0.1939	0.1939		0.1935	0.1935		644.2060	644.2060	0.0649		645.8292
Total	**0.4565**	**3.3540**	**4.1821**	**6.7800e-003**		**0.1939**	**0.1939**		**0.1935**	**0.1935**		**644.2060**	**644.2060**	**0.0649**		**645.8292**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.1000e-003	0.1033	0.0244	2.7000e-004	6.7700e-003	2.2000e-004	6.9900e-003	1.9500e-003	2.1000e-004	2.1600e-003		28.8959	28.8959	1.3600e-003		28.9298
Worker	0.0161	9.4000e-003	0.1228	4.0000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		39.5980	39.5980	8.9000e-004		39.6201
Total	**0.0192**	**0.1127**	**0.1472**	**6.7000e-004**	**0.0478**	**4.8000e-004**	**0.0483**	**0.0128**	**4.5000e-004**	**0.0133**		**68.4938**	**68.4938**	**2.2500e-003**		**68.5499**

3.5 Building Construction - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	3.3540	4.1821	6.7800e-003		0.1939	0.1939		0.1935	0.1935	0.0000	644.2060	644.2060	0.0649		645.8292
Total	**0.4565**	**3.3540**	**4.1821**	**6.7800e-003**		**0.1939**	**0.1939**		**0.1935**	**0.1935**	**0.0000**	**644.2060**	**644.2060**	**0.0649**		**645.8292**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	3.1000e-003	0.1033	0.0244	2.7000e-004	6.7700e-003	2.2000e-004	6.9900e-003	1.9500e-003	2.1000e-004	2.1600e-003		28.8959	28.8959	1.3600e-003		28.9298
Worker	0.0161	9.4000e-003	0.1228	4.0000e-004	0.0411	2.6000e-004	0.0413	0.0109	2.4000e-004	0.0111		39.5980	39.5980	8.9000e-004		39.6201
Total	**0.0192**	**0.1127**	**0.1472**	**6.7000e-004**	**0.0478**	**4.8000e-004**	**0.0483**	**0.0128**	**4.5000e-004**	**0.0133**		**68.4938**	**68.4938**	**2.2500e-003**		**68.5499**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4271	3.0971	4.1742	6.7800e-003		0.1686	0.1686		0.1682	0.1682		644.2060	644.2060	0.0630		645.7797
Total	**0.4271**	**3.0971**	**4.1742**	**6.7800e-003**		**0.1686**	**0.1686**		**0.1682**	**0.1682**		**644.2060**	**644.2060**	**0.0630**		**645.7797**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8900e-003	0.0979	0.0229	2.7000e-004	6.7700e-003	1.9000e-004	6.9600e-003	1.9500e-003	1.9000e-004	2.1300e-003		28.6145	28.6145	1.3000e-003		28.6469
Worker	0.0150	8.4300e-003	0.1132	3.8000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		38.1448	38.1448	7.9000e-004		38.1646
Total	**0.0179**	**0.1064**	**0.1361**	**6.5000e-004**	**0.0478**	**4.4000e-004**	**0.0483**	**0.0128**	**4.2000e-004**	**0.0133**		**66.7592**	**66.7592**	**2.0900e-003**		**66.8115**

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4271	3.0971	4.1742	6.7800e-003		0.1686	0.1686		0.1682	0.1682	0.0000	644.2060	644.2060	0.0630		645.7797
Total	**0.4271**	**3.0971**	**4.1742**	**6.7800e-003**		**0.1686**	**0.1686**		**0.1682**	**0.1682**	**0.0000**	**644.2060**	**644.2060**	**0.0630**		**645.7797**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.8900e-003	0.0979	0.0229	2.7000e-004	6.7700e-003	1.9000e-004	6.9600e-003	1.9500e-003	1.9000e-004	2.1300e-003		28.6145	28.6145	1.3000e-003		28.6469
Worker	0.0150	8.4300e-003	0.1132	3.8000e-004	0.0411	2.5000e-004	0.0413	0.0109	2.3000e-004	0.0111		38.1448	38.1448	7.9000e-004		38.1646
Total	**0.0179**	**0.1064**	**0.1361**	**6.5000e-004**	**0.0478**	**4.4000e-004**	**0.0483**	**0.0128**	**4.2000e-004**	**0.0133**		**66.7592**	**66.7592**	**2.0900e-003**		**66.8115**

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0271	0.4202	0.8205	1.2600e-003		7.8000e-003	7.8000e-003		7.1700e-003	7.1700e-003		121.9649	121.9649	0.0395		122.9510
Total	**2.6005**	**0.4202**	**0.8205**	**1.2600e-003**		**7.8000e-003**	**7.8000e-003**		**7.1700e-003**	**7.1700e-003**		**121.9649**	**121.9649**	**0.0395**		**122.9510**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.9900e-003	1.6900e-003	0.0226	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.6290	7.6290	1.6000e-004		7.6329
Total	**2.9900e-003**	**1.6900e-003**	**0.0226**	**8.0000e-005**	**8.2100e-003**	**5.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.6290**	**7.6290**	**1.6000e-004**		**7.6329**

3.6 Architectural Coating - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.5735					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0271	0.4202	0.8205	1.2600e-003		7.8000e-003	7.8000e-003		7.1700e-003	7.1700e-003	0.0000	121.9649	121.9649	0.0395		122.9510
Total	**2.6005**	**0.4202**	**0.8205**	**1.2600e-003**		**7.8000e-003**	**7.8000e-003**		**7.1700e-003**	**7.1700e-003**	**0.0000**	**121.9649**	**121.9649**	**0.0395**		**122.9510**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	2.9900e-003	1.6900e-003	0.0226	8.0000e-005	8.2100e-003	5.0000e-005	8.2700e-003	2.1800e-003	5.0000e-005	2.2300e-003		7.6290	7.6290	1.6000e-004		7.6329
Total	**2.9900e-003**	**1.6900e-003**	**0.0226**	**8.0000e-005**	**8.2100e-003**	**5.0000e-005**	**8.2700e-003**	**2.1800e-003**	**5.0000e-005**	**2.2300e-003**		**7.6290**	**7.6290**	**1.6000e-004**		**7.6329**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0310	0.1113	0.2812	1.0200e-003	0.0879	8.0000e-004	0.0887	0.0235	7.5000e-004	0.0243		103.5841	103.5841	3.5900e-003		103.6739
Unmitigated	0.0334	0.1247	0.3436	1.3000e-003	0.1140	1.0000e-003	0.1150	0.0305	9.4000e-004	0.0314		131.4393	131.4393	4.3400e-003		131.5478

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	23.24	22.68	19.36	52,210	40,262
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	23.24	22.68	19.36	52,210	40,262

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749
Enclosed Parking with Elevator	0.578638	0.038775	0.193686	0.110919	0.015677	0.005341	0.018293	0.026358	0.002641	0.002200	0.005832	0.000891	0.000749

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
NaturalGas Unmitigated	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	205.184	2.2100e-003	0.0189	8.0500e-003	1.2000e-004		1.5300e-003	1.5300e-003		1.5300e-003	1.5300e-003		24.1393	24.1393	4.6000e-004	4.4000e-004	24.2827
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.2100e-003**	**0.0189**	**8.0500e-003**	**1.2000e-004**		**1.5300e-003**	**1.5300e-003**		**1.5300e-003**	**1.5300e-003**		**24.1393**	**24.1393**	**4.6000e-004**	**4.4000e-004**	**24.2827**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	0.193241	2.0800e-003	0.0178	7.5800e-003	1.1000e-004		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003		22.7343	22.7343	4.4000e-004	4.2000e-004	22.8693
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0800e-003**	**0.0178**	**7.5800e-003**	**1.1000e-004**		**1.4400e-003**	**1.4400e-003**		**1.4400e-003**	**1.4400e-003**		**22.7343**	**22.7343**	**4.4000e-004**	**4.2000e-004**	**22.8693**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222
Unmitigated	0.3101	0.0154	0.3359	9.0000e-005		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	15.4197	15.4197	8.6000e-004	2.7000e-004	15.5222

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2529					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3600e-003	0.0116	4.9400e-003	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	14.8235	14.8235	2.8000e-004	2.7000e-004	14.9116
Landscaping	0.0100	3.8100e-003	0.3310	2.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003		0.5962	0.5962	5.8000e-004		0.6106
Total	**0.3101**	**0.0154**	**0.3359**	**9.0000e-005**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**15.4197**	**15.4197**	**8.6000e-004**	**2.7000e-004**	**15.5222**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0458					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2529					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3600e-003	0.0116	4.9400e-003	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	14.8235	14.8235	2.8000e-004	2.7000e-004	14.9116
Landscaping	0.0100	3.8100e-003	0.3310	2.0000e-005		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003		0.5962	0.5962	5.8000e-004		0.6106
Total	**0.3101**	**0.0154**	**0.3359**	**9.0000e-005**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**15.4197**	**15.4197**	**8.6000e-004**	**2.7000e-004**	**15.5222**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation