

***SANTA TERESA AND SNELL
AVENUE AFFORDABLE HOUSING
AIR QUALITY & GREENHOUSE GAS
EMISSIONS ASSESSMENT***

San José, California

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Introduction

The purpose of this report is to address air quality and greenhouse gas (GHG) impacts associated with the proposed affordable residential development located at 5885 Santa Teresa Boulevard in San José, California. Air quality and GHG impacts from this project would be associated with demolition of the existing land uses, construction of the new building and infrastructure, and operation of the project. Air pollutants and GHG emissions were predicted using appropriate computer models. The analysis was conducted following guidance provided by the Bay Area Air Quality Management District (BAAQMD).¹

Project Description

The 1.46-acre project site consists of existing surface parking and undeveloped land, with minimal landscaping. The project proposes to demolish the existing parking lot and construct three, multi-family residential buildings, each of which would be three stories in height and provide a total of 49 very-low-income housing units. The project also proposes a 16,800 square-foot (sf) parking lot with a total of 44 parking spaces. Construction is expected to begin in January 2025 and will be completed by February 2026.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}).

Air Pollutants of Concern

High ozone concentrations in the air basin are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x). These precursor pollutants react under certain meteorological conditions to form ozone. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ambient ozone concentrations. The highest ozone concentrations in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone concentrations aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant in the air basin. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter concentrations aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

¹ Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*. April 2023.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer). TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure of TACs can result in adverse health effects, they are regulated at the regional, State, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects from diesel exhaust exposure a complicated scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015 and incorporated into BAAQMD's current CEQA guidance.²

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, people over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children. The closest sensitive receptors to the project site are the adjacent single-family residences to the south and west, with additional single-family residences at further distances to the southwest and northeast. There are also students at Santa Teresa and Pheonix High Schools to the east of the site. This project would introduce new sensitive receptors (i.e., residents) to the area.

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide

² OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

fuel standards. However, California also has the ability to set motor vehicle emission standards and standards for fuel, as long as they are the same or more stringent than the nationwide standards.

In the past twenty years, the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of NO_x and particulate matter (PM_{2.5}) and because the EPA has identified DPM as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce particulate matter and NO_x emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.³

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The current standards limit the amount of sulfur allowed in diesel fuel to 15 parts per million by weight (ppmw). Ultra-low sulfur diesel (ULSD), as it is referred to, is required for use by all vehicles in the U.S.

All of the above federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

NEPA/HUD Significance Thresholds

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the Federal level, the EPA administers the Clean Air Act. The California Clean Air Act is administered by the CARB at the State level and by the Air Quality Management Districts at the regional and local levels. BAAQMD regulates air quality at the regional level, which includes the nine-county Bay Area.

The federal Clean Air Act requires each state to identify areas that have ambient air quality in violation of federal standards. States are required to develop, adopt, and implement a state implementation plan (SIP) to achieve, maintain, and enforce federal ambient air quality standards in these nonattainment areas. SIP elements are developed on a pollutant-by-pollutant basis whenever one or more air quality standards are being violated. In California, local and regional air pollution control agencies have primary responsibility for developing SIPs, generally in coordination with local and regional land use and transportation planning agencies. BAAQMD is the responsible regional air pollution control agency in the San Francisco Bay Area.

An area's compliance with national ambient air quality standards under the Clean Air Act is categorized as nonattainment, attainment (better than national standards), unclassifiable, or attainment/cannot be classified. The unclassified designation includes attainment areas that

³ USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

comply with federal standards, as well as areas for which monitoring data are lacking. Unclassified areas are treated as attainment areas for most regulatory purposes. Simple attainment designations generally are used only for areas that transition from nonattainment status to attainment status. Areas that have been reclassified from nonattainment to attainment of federal air quality standards are automatically considered maintenance areas, although this designation is seldom noted in status listings. The San Francisco Bay Area is designated as nonattainment for the federal 8-hour ozone standard and the 24-hour PM_{2.5} standard. The San Francisco Bay Area is designated as attainment or unclassified for the other national ambient air quality standards.

With respect to the state ambient air quality standards, California classifies areas as attainment, nonattainment, nonattainment-transitional, or unclassified. The San Francisco Bay Area is designated as nonattainment for the state ozone, inhalable particulate matter (PM₁₀), and PM_{2.5} standards and as attainment or unclassified for the other state ambient air quality standards. The predominant regulation that guides assessment of air quality impacts of federal actions is the General Conformity Rule, established under the Clean Air Act (Section 176(c)(4)). The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. The project area is located within the San Francisco Bay Area Air Basin, which is designated as a nonattainment area for the federal 8-hour ozone standard and the federal PM_{2.5} standard. The air basin is designated as a maintenance area with respect to the federal carbon monoxide (CO) standards.

In keeping with the General Conformity Rule process, this assessment applies the appropriate *de minimis* thresholds of the Rule as they apply to the San Francisco Bay Area Air Basin for ozone precursors, PM_{2.5}, and CO. The General Conformity *de minimis* thresholds for these pollutants are 100 tons per year for each pollutant or ozone precursor pollutant (i.e., NO_x and ROG).

State Regulations

The California Air Resources Board (CARB) has set statewide ambient air quality standards (CAAQS) and emission standards for on-road and off-road mobile sources that are more stringent than those adopted by the EPA. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2008, CARB approved a regulation to reduce emissions of DPM and NO_x from on-road heavy-duty diesel fueled vehicles.⁴ The regulation required affected vehicles to meet specific performance requirements between 2014 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or equivalent by 2023. Advanced Clean Cars and Advanced Clean Cars II (ACC II) that will require new all new cars and light trucks sold in California will be zero-emission vehicles by 2035.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San

⁴ Available online: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>. Accessed: November 21, 2014.

Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County, and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.⁵ The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program has been implemented in three phases that includes an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses has been used to develop emission reduction activities in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. Seven areas have been identified by BAAQMD as impacted communities. They include Eastern San Francisco, Richmond/San Pablo, Western Alameda, San José, Vallejo, Concord, and Pittsburgh/Antioch. The project site is not within any of the BAAQMD CARE areas.

Overburdened communities are areas located (i) within a census tract identified by the California Communities Environmental Health Screening Tool (CalEnviroScreen), Version 4.0 implemented by OEHHA, as having an overall score at or above the 70th percentile, or (ii) within 1,000 feet of any such census tract.⁶ The BAAQMD has identified several overburdened areas within its boundaries. However, the project site is not within an overburdened area as the Project site and surrounding area are scored at the 10th percentile on CalEnviroScreen.⁷

BAAQMD CEQA Air Quality Guidelines

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. In 2023, the BAAQMD revised the *California Environmental Quality Act (CEQA) Air Quality Guidelines* that include significance thresholds to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The current BAAQMD guidelines

⁵ See BAAQMD: <https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program> , accessed 2/18/2021.

⁶ See BAAQMD: https://www.baaqmd.gov/~/_media/dotgov/files/rules/reg-2-permits/2021-amendments/documents/20210722_01_appendixd_mapsofverburdenedcommunities-pdf.pdf?la=en.

⁷ OEHHA, CalEnviroScreen 4.0 Maps https://experience.arcgis.com/experience/11d2f52282a54cee6184203/page/CalEnviroScreen-4_0/

provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds of significance, mitigation measures, and background air quality information. They include assessment methodologies for criteria air pollutants, air toxics, odors, and GHG emissions, as shown in Table 1.⁸ Air quality impacts and health risks are considered potentially significant if they exceed these thresholds.

Table 1. BAAQMD CEQA Significance Thresholds

| Criteria Air Pollutant | Construction Thresholds | Operational Thresholds | |
|--|--|---|--------------------------------------|
| | Average Daily Emissions (lbs./day) | Average Daily Emissions (lbs./day) | Annual Average Emissions (tons/year) |
| ROG | 54 | 54 | 10 |
| NO _x | 54 | 54 | 10 |
| PM ₁₀ | 82 (Exhaust) | 82 | 15 |
| PM _{2.5} | 54 (Exhaust) | 54 | 10 |
| CO | Not Applicable | 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) | |
| Fugitive Dust | Construction Dust Ordinance or other Best Management Practices (BMPs)* | Not Applicable | |
| Greenhouse Gas Emissions | | | |
| Land Use Projects – (Must Include A or B) | <p>A. Projects must include, at a minimum, the following project design elements:</p> <ol style="list-style-type: none"> 1. Buildings <ol style="list-style-type: none"> a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation <ol style="list-style-type: none"> a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA: <ol style="list-style-type: none"> i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. <p>B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).</p> | | |
| <p>Note: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, PM_{2.5} = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.</p> <p>* BAAQMD strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses.</p> | | | |

Source: Bay Area Air Quality Management District, 2023

⁸ Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*. April 2023.

The BAAQMD recommends all projects include a “basic” set of best management practices (BMPs) to manage fugitive dust and consider impacts from dust (i.e., fugitive PM₁₀ and PM_{2.5}) to be less than significant if BMPs are implemented. The project would be required to implement the following BMPs recommended by BAAQMD, which have been adopted by the City of San Jose as Standard Permit Conditions, during all phases of construction to reduce dust and other particulate matter emissions.

Basic Best Management Practices / Standard Permit Conditions: Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following BMPs that are required of all projects:

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

BAAQMD strongly encourages enhanced BMPs for construction sites near schools, residential areas, or other sensitive land uses. Enhanced measures include:

- Limit the simultaneous occurrence of excavation, grading, and ground-disturbing construction activities.
- Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Plant vegetative ground cover (e.g., fast-germinating native grass seed) in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- Minimize the amount of excavated material or waste materials stored at the site.
- Hydroseed or apply non-toxic soil stabilizers to construction areas, including previously graded areas, that are inactive for at least 10 calendar days.

San José Envision 2040 General Plan

The San José Envision 2040 General Plan includes goals, policies, and actions to reduce exposure of the City’s sensitive population to exposure of air pollution and toxic air contaminants or TACs. The following goals, policies, and actions are applicable to the proposed project and this assessment:

Applicable Goals – Air Pollutant Emission Reduction

Goal MS-10 Minimize emissions from new development.

Applicable Policies – Air Pollutant Emission Reduction

- MS-10.1 Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.
- MS-10.2 Consider the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region’s Clean Air Plan and State law.
- MS-10.3 Promote the expansion and improvement of public transportation services and facilities, where appropriate, to both encourage energy conservation and reduce air pollution.
- MS-10.5 In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.
- MS-10.7 Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.

- MS-10.11 Enforce the City’s wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.
- MS-10.13 As a part of City of San José Sustainable City efforts, educate the public about air polluting household consumer products and activities that generate air pollution. Increase public awareness about the alternative products and activities that reduce air pollutant emissions.

Applicable Goals – Toxic Air Contaminants

- Goal MS-11 Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.

Applicable Policies – Toxic Air Contaminants

- MS-11.1 Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.
- MS-11.2 For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.
- MS-11.4 Encourage the installation of appropriate air filtration at existing schools, residences, and other sensitive receptor uses adversely affected by pollution sources.
- MS-11.5 Encourage the use of pollution absorbing trees and vegetation in buffer areas between substantial sources of TACs and sensitive land uses.

Actions – Toxic Air Contaminants

- MS-11.6 Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate matter smaller than 2.5 microns (PM2.5), emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

- MS-11.7 Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.
- MS-11.8 For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Applicable Goals – Construction Air Emissions

Goal MS-13 Minimize air pollutant emissions during demolition and construction activities

Applicable Policies – Construction Air Emissions

MS-13.1 Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Applicable Actions – Construction Air Emissions

- MS-13.4 Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.
- MS-13.5 Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- MS-13.6 Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement of construction.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD is the regional agency responsible for overseeing compliance with State and federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.⁹ The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the

⁹ Bay Area Air Quality Management District, *Final 2017 Clean Air Plan*, 2017.

climate. The BAAQMD has also recently updated its CEQA guidelines to assist lead agencies in evaluating the significance of air quality and GHG impacts. In formulating compliance strategies, BAAQMD relies on the planned land uses identified in local general plans. Land use planning affects vehicle travel, which, in turn, affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Guidance provided in the BAAQMD CEQA guidelines recommends that Plans show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds provided in BAAQMD’s CEQA guidance. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have emissions below the BAAQMD thresholds (see Impact below) and 2) the project would be considered urban infill, 3) the project would be located near employment centers, 4) the project would be located near transit with regional connections.

Impact AIR-2: 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?

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the NAAQS and the CAAQS. The area is also considered non-attainment for PM₁₀ under the CAAQS, but not the NAAQS. The area has attained both State and Federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for O₃, PM_{2.5} and PM₁₀, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. The O₃ precursor pollutant thresholds are for ROG and NO_x, while PM₁₀, and PM_{2.5} have specific thresholds. The thresholds apply to both construction period emissions and operational period emissions.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2022 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CalEEMod model output along with construction inputs are included in *Attachment 1*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 2. Summary of Project Land Use Inputs

| Project Land Uses | Size | Units | Square Feet (sf) | Acreage |
|--------------------------|-------------|----------------|-------------------------|----------------|
| Apartments Mid Rise | 49 | Dwelling Unit | 26,779 | 1.46 |
| Parking Lot | 44 | Parking Spaces | - | |

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment quantities, average hours per day, total number of workdays, and schedule, were provided by the applicant (see *Attachment 1*). The construction schedule assumed that the earliest possible start date would be January 2025 and the project would be built out over a period of approximately 13 months or 300 construction workdays. The earliest year of operation was assumed to be 2026.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the amount of demolition material to be exported, soil imported and/or exported to the site, and the amount of concrete and asphalt truck trips to and from the site. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. Daily haul trips for demolition and grading were estimated by CalEEMod using the provided demolition and grading volumes. The number of concrete and asphalt total round haul trips were provided for the project and converted to daily one-way trips, assuming two trips per delivery. These values are shown in the project construction equipment worksheets included in *Attachment 1*.

Summary of Computed Construction Emissions

Average daily construction emissions were estimated for the total duration of the project (300 days). Table 3 shows the unmitigated average daily construction emissions of ROG, NO_x, PM₁₀ exhaust, and PM_{2.5} exhaust during construction of the project. As indicated in Table 3, predicted unmitigated project construction emissions would not exceed the BAAQMD significance thresholds during construction or the General Conformity (i.e., NEPA) *de minimis* thresholds.

Table 3. Construction Period Emissions - Unmitigated

| Year | ROG | NO _x | PM ₁₀ Exhaust | PM _{2.5} Exhaust |
|---|--------------------|--------------------|--------------------------|---------------------------|
| <i>Construction Emissions Per Year (Tons)</i> | | | | |
| 2025+2026* | 0.29 | 0.48 | 0.01 | 0.01 |
| <i>NEPA De Minimis Thresholds (tons/year)</i> | <i>100 tons</i> | <i>100 tons</i> | <i>100 tons</i> | <i>100 tons</i> |
| Exceed Threshold? | No | No | No | No |
| <i>Average Daily Construction Emissions Per Year (pounds/day)</i> | | | | |
| 2025+2026* (300 construction workdays) | 1.94 | 3.21 | 0.10 | 0.09 |
| <i>BAAQMD Thresholds (pounds per day)</i> | <i>54 lbs./day</i> | <i>54 lbs./day</i> | <i>82 lbs./day</i> | <i>54 lbs./day</i> |
| Exceed Threshold? | No | No | No | No |

*Includes 2 months of 2026.

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly

controlled, vehicles leaving the site deposit mud on local streets, which is an additional source of airborne dust after it dries. The BAAQMD recommends all projects include a “basic” set of best management practices (BMPs) to manage fugitive dust and considers impacts from dust (i.e., fugitive PM₁₀ and PM_{2.5}) to be less-than-significant if BMPs are implemented. San José General Policy MS-10.1 specifies that projects assess projected air emissions from new developments in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Construction projects must identify and implement all of these feasible air emission reduction measures. Therefore, the project would be required to implement the following BAAQMD BMPs, which have been adopted by the City as Standard Permit Conditions (per General Plan policies MS 10.1, MS 13.1, and MS 13.4), during all phases of construction.

Standard Permit Conditions / Basic BMPs: Include measures to control dust and exhaust during construction.

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. The contractor shall implement the following BMPs that are required of all projects:

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

corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Standard Permit Conditions / Basic BMPs

The measures above are consistent with BAAQMD-recommended basic BMPs for reducing fugitive dust contained in the BAAQMD CEQA Air Quality Guidelines. For this analysis, only the basic set of BMPs are required as the unmitigated fugitive dust emissions from construction are below the BAAQMD single-source threshold.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future residents. Evaporative ROG emissions from architectural coatings and maintenance products (classified as consumer products) are also typical ROG emission sources from these types of land uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2026 if construction begins in 2025. Emissions associated with build-out later than 2026 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-specific daily trip generation rate provided by the traffic consultant was entered into the model.¹⁰ The project would produce approximately 236 daily trips. When accounting for the *Transit Reduction*, the project would then produce 231 new daily trips. The daily trip generation was calculated using ITE trip generation rates, the size of the project land uses, and the adjusted total automobile trips after reductions. The Saturday and Sunday trip rates were derived by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The default trip lengths and trip types specified by CalEEMod were used.

¹⁰ W-Trans, *Draft Trip Generation Assessment for the 5885 Santa Teresa Boulevard Project*, October 23, 2023.

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The electricity produced emission rate was modified in CalEEMod. An emission factor of 178 pounds of CO₂ per megawatt of electricity produced was entered into CalEEMod, which is based on San Jose Clean Energy’s (SJCE) 2020 emissions rate.¹¹ It should be noted that per Climate Smart San Jose and San Jose’s Greenhouse Gas Reduction Strategy, SJCE’s goal is to provide 100-percent carbon-free electricity prior to 2030.¹²

The City of San José passed an ordinance in December 2020 that prohibits the use of natural gas infrastructure in new residential, office, and most retail-type buildings.¹³ This ordinance applies to any new construction starting August 1, 2021. Natural gas use for the residential land use was set to zero and reassigned to electricity use in CalEEMod.

Other Inputs

Default model assumptions for emissions associated with solid waste generation and water use were used. Wastewater treatment was estimated to be 100% aerobic conditions to represent City wastewater treatment plant conditions. The project site would not send wastewater to on-site septic tanks or facultative lagoons.

Summary of Computed Operational Emissions

Annual emissions were predicted using CalEEMod and daily emissions were estimated assuming 365 days of operation. Table 4 shows unmitigated net average daily operational emissions of ROG, NO_x, total PM₁₀, and total PM_{2.5} during operation of the project. Operational period emissions would not exceed the BAAQMD significance thresholds or the NEPA *de minimis* thresholds.

Table 4. Operational Period Emissions

| Scenario | ROG | NO _x | PM ₁₀ | PM _{2.5} |
|---|-----------------|-----------------|------------------|-------------------|
| 2026 Annual Project Operational Emissions (<i>tons/year</i>) | 0.30 | 0.10 | 0.22 | 0.06 |
| <i>BAAQMD Thresholds (tons/year)</i> | <i>10 tons</i> | <i>10 tons</i> | <i>15 tons</i> | <i>10 tons</i> |
| <i>NEPA De Minimis Thresholds (tons/year)</i> | <i>100 tons</i> | <i>100 tons</i> | <i>100 tons</i> | <i>100 tons</i> |
| <i>Exceed Threshold?</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> |
| 2026 Daily Project Operational Emissions (<i>pounds/day</i>) ¹ | 1.63 | 0.55 | 1.22 | 0.32 |
| <i>BAAQMD Thresholds (pounds/day)</i> | <i>54 lbs.</i> | <i>54 lbs.</i> | <i>82 lbs.</i> | <i>54 lbs.</i> |
| <i>Exceed Threshold?</i> | <i>No</i> | <i>No</i> | <i>No</i> | <i>No</i> |

Notes: ¹Assumes 365-day operation.

¹¹ San Jose Clean Energy Website, Standard GreenSource service. Web: <https://sanjosecleanenergy.org/commercial-rates/>

¹² City of San José, 2020. “2030 Greenhouse Gas Reduction Strategy”, August. Web: <https://www.sanjoseca.gov/home/showpublisheddocument/63667/637347412207870000>

¹³ City of San José, 2020. “Expand Natural Gas Ban”, December. Web: <https://www.sanjoseca.gov/Home/Components/News/News/2210/4699>

GREENHOUSE GAS EMISSIONS

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO₂, CH₄, and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO₂ being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO₂ equivalents (CO₂e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2022, total gross nationwide GHG emissions were 5,215.6 million metric tons (MMT) carbon dioxide equivalent (CO₂e).¹⁴ These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission

¹⁴ United States Environmental Protection Agency, 2022. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2020*. February. Web: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

inventory on an annual basis where the latest inventory includes 2000 through 2020 emissions.¹⁵ In 2020, GHG emissions from statewide emitting activities were 369.2 MMT CO₂e. The 2020 emissions have decreased by 25 percent since peak levels in 2004 and are 35.3 MMT CO₂e lower than 2019 emissions level and almost 62 MMT CO₂e below the State's 2020 GHG limit of 431 MMT CO₂e. Per capita GHG emissions in California have dropped from a 2001 peak of 13.8 MT CO₂e per person to 9.3 MT CO₂e per person in 2020.

Recent Regulatory Actions for GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 – California Global Warming Solutions Act (2006)

Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05, which has a target of reducing GHG emissions 85 percent below 1990 levels.

The first Scoping Plan for AB 32 was adopted by CARB in December 2008. Its most recent update was completed in December of 2022¹⁶. It contains the State's main strategies to achieve carbon neutrality by 2045. This plan extends and expands upon the earlier versions with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. It also takes the step of adding carbon neutrality as a science-based guide and touchstone for California's climate work. Measures to achieve carbon neutrality include rapidly moving to zero emission vehicles (ZEV), removing natural gas as an option for space conditioning, increasing the number of solar arrays and wind turbines, and scaling up renewable hydrogen for hard-to-electrify end uses.

Senate Bill 375 – California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities.

¹⁵ CARB. 2022. *California Greenhouse Gas Emission for 2000 to 2020*. Web: https://ww2.arb.ca.gov/sites/default/files/classic/cc/inventory/2000-2020_ghg_inventory_trends.pdf

¹⁶ CARB. 2022. Final 2022 Scoping Plan Update and Appendices. Web: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

Senate Bill 350 - Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed EO B-30-15, which extended the goals of AB 32, setting a GHG emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed Senate Bill (SB) 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*.¹⁷ While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB has drafted a 2022 Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The 2022 draft plan:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 or earlier.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as a driving principle.
- Incorporates the contribution of natural and working lands to the state's GHG emissions, as well as its role in achieving carbon neutrality.
- Relies on the most up to date science, including the need to deploy all viable tools,

¹⁷ California Air Resource Board, 2017. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Targets*. November. Web: https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

including carbon capture and sequestration as well a direct air capture.

- Evaluates multiple options for achieving our GHG and carbon neutrality targets, as well as the public health benefits and economic impacts associated with each.

The Scoping Plan was updated in 2022 and lays out how the state can get to carbon neutrality by 2045 or earlier. It is the first Scoping Plan that adds carbon neutrality as a science-based guide and touchstone beyond statutorily established emission reduction targets.¹⁸

The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The 2022 Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and to not only obtain the statewide goals, but cost-effectively achieve carbon-neutrality by 2045 or earlier. In the 2022 Scoping Plan, CARB recommends:

- VMT per capita reduced 12% below 2019 levels by 2030 and 22% below 2019 levels by 2045.
- 100% of Light-duty vehicle sales are zero emissions vehicles (ZEV) by 2035.
- 100% of medium duty/heavy duty vehicle sales are ZEV by 2040.
- 100% of passenger and other locomotive sales are ZEV by 2030.
- 100% of line haul locomotive sales are ZEV by 2035.
- All electric appliances in new residential and commercial building beginning 2026 (residential) and 2029 (commercial).
- 80% of residential appliance sales are electric by 2030 and 100% of residential appliance sales are electric by 2035.
- 80% of commercial appliance sales are electric by 2030 and 100% of commercial appliance sales are electric by 2045.

SB 743 Transportation Impacts

Senate Bill 743 required lead agencies to abandon the old “level of service” metric for evaluating a project’s transportation impacts, which was based solely on the amount of delay experienced by motor vehicles. In response, the Governor’s Office of Planning and Research (OPR) developed a VMT metric that considered other factors such as reducing GHG emissions and developing multimodal transportation¹⁹. A VMT-per-capita metric was adopted into the CEQA Guidelines Section 15064.3 in November 2017. Given current baseline per-capita VMT levels computed by CARB in the 2030 Scoping Plan of 22.24 miles per day for light-duty vehicles and 24.61 miles per day for all vehicle types, the reductions needed to achieve the 2050 climate goal are 16.8 percent for light-duty vehicles and 14.3 percent for all vehicle types combined. Based on this analysis (as well as other factors), OPR recommended using a 15-percent reduction in per capita VMT as an appropriate threshold of significance for evaluating transportation impacts.

¹⁸ <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

¹⁹ Governor’s Office of Planning and Research. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. December.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California’s RPS program goals, furthering California’s focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retail sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2027 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.²⁰ The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2022 California Building Standard Code) was effective as of January 1, 2023.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2022 Energy Code) replaced the 2019 Energy Code as of January 1, 2023. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.²¹

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CalGreen 2022 standards require deployment of additional EV chargers in various building

²⁰ See: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.>

²¹ See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

types, including multifamily residential and nonresidential land uses. They include requirements for both EV capable parking spaces and the installation of Level 2 EV supply equipment for multifamily residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness, installation of EV chargers, and include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions. Providing EV charging infrastructure that meets current CALGreen requirements will not be sufficient to power the anticipated more extensive level of EV penetration in the future that is needed to meet SB 30 climate goals.

CEC studies have identified the most aggressive electrification scenario as putting the building sector on track to reach the carbon neutrality goal by 2045.²² Installing new natural gas infrastructure in new buildings will interfere with this goal. To meet the State’s goal, communities have been adopting “Reach” codes that prohibit natural gas connections in new and remodeled buildings.

Advanced Clean Cars

The Advanced Clean Cars Program, originally adopted by CARB in 2012, was designed to bring together CARB’s traditional passenger vehicle requirements to meet federal air quality standards and also support California’s AB 32 goals to develop and implement programs to reduce GHG emissions back down to 1990 levels by 2020, a goal achieved in 2016 as a result of numerous emissions reduction programs.

Advanced Clean Cars II (ACC II) is phase two of the original rule. ACC II establishes a year-by-year process, starting in 2026, so all new cars and light trucks sold in California will be zero-emission vehicles by 2035, including plug-in hybrid electric vehicles. The regulation codifies the light-duty vehicle goals set out in Governor Newsom’s Executive Order N-79-20. Currently, 16 percent of new light-duty vehicles sold in California are zero emissions or plug-in hybrids. By 2030, 68 percent of new vehicles sold in California would be zero emissions and 100 percent by 2035.

Since this regulation was recently adopted, the air pollutant and GHG emissions computed in this assessment do not reflect the emissions reductions. Future updates to the State’s mobile emission factor model, EMFAC, will include these effects.

City of San José 2030 Greenhouse Gas Reduction Strategy

The City of San José 2030 Greenhouse Gas Reduction Strategy²³ (2030 GHGRS) is a plan to reduce GHG emissions and address climate change. Adopted in August 2020, the 2030 GHGRS contains goals and strategies to reduce greenhouse gas emissions by 40 percent below 1990 levels by 2030 and to meet the long-term target of carbon neutrality by 2045, in accordance with the AB

²² California Energy Commission. 2021. *Final Commission Report: California Building Decarbonization Assessment*. Publication Number CEC-400-2021-006-CMF. August

²³ City of San José, *Greenhouse Gas Reduction Strategy*, August 2020. Web: <https://www.sanjoseca.gov/your-government/departments-offices/planning-building-code-enforcement/planning-division/environmental-review/greenhouse-gas-reduction-strategy>. Accessed on 08/07/2023.

32 “Climate Change Scoping Plan” and SB 32 “The Global Warming Solutions Act of 2006”. The 2030 GHGRS serves as San José’s qualified climate action plan (CAP). The Development Compliance Checklist serves to apply the relevant General Plan and 2030 GHGRS policies through a streamlined review process for proposed new development projects.

BAAQMD GHG Significance Thresholds

On April 20, 2022, BAAQMD adopted new thresholds of significance for operational GHG emissions from land use projects for projects beginning the CEQA process. The current thresholds of significance are:

- A. Projects must include, at a minimum, the following project design elements:
 - a. Buildings
 - i. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development).
 - ii. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
 - b. Transportation
 - i. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - 1. Residential Projects: 15 percent (16.8 percent in Petaluma) below the existing VMT per capita
 - 2. Office Projects: 15 percent (16.8 percent in Petaluma) below the existing VMT per employee
 - 3. Retail Projects: no net increase in existing VMT
 - ii. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

New land use projects are required to meet either section A or B from the above list, not both, to be considered less than significant.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with

vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the construction period emissions. CalEEMod output is included in *Attachment 1*.

Construction GHG Emissions

GHG emissions associated with construction were computed at 193 MT of CO₂e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though the California Office of Planning and Research (OPR) recommends quantifying emissions and disclosing that GHG emissions would occur during construction, even in cases where BAAQMD does not. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational GHG Emissions

The CalEEMod model, along with the project vehicle trip generation rates were used to estimate daily emissions associated with operation of the proposed project. As shown in Table 5 for informational purposes, annual GHG emissions resulting from operation of the proposed project are predicted to be 249 MT of CO₂e in 2026.

Table 5. Annual Project GHG Emissions (CO₂e) in Metric Tons

| Source Category | 2026 Proposed Project |
|-----------------------------------|-----------------------|
| Mobile | 211 |
| Area | 1 |
| Energy Consumption | 24 |
| Water Usage | 2 |
| Solid Waste Generation | 11 |
| Refrigerants | <1 |
| Total (MT CO ₂ e/year) | 249 |

For this impact to be considered less than significant, it must be consistent with a local GHG reduction strategy (Threshold B) or meet the minimum project design elements recommended by BAAQMD (Threshold A). Threshold B is being applied to the analysis of this project as the City of San José has a qualified CAP that includes a Development Compliance Checklist. The CAP Development Compliance Checklist is included in *Attachment 2*.

While it is anticipated that the project will be consistent with the City of San José’s CAP Development Compliance Checklist, Threshold A is addressed for this Project as follows:

1. Avoid construction of new natural gas connections,
 - Conforms – the project plans do not include new natural gas infrastructure or natural gas usage.
2. Avoid wasteful or inefficient use of electricity,
 - Conforms – any new development would have to meet the City’s building code, which meet 2022 California Green Building Standards Code, Title 24, Part 11 (CALGreen) requirements.
3. Include electric vehicle (EV) charging infrastructure that meets current Building Code CALGreen Tier 2 compliance, and
 - Conforms – the project would provide 10% of its parking for EVSE, which would meet the City’s and CALGreen Tier 2 requirements.
4. Reduce VMT per service population by 15 percent over regional average.
 - Conforms – the project would provide 100% affordable housing, and therefore it is assumed the project would have a less-than-significant VMT impact per SB 743.

The project is anticipated to comply with four of the four requirements of Threshold A.

Impact GHG-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of San José has a CAP and enforces its building codes, which aim to reduce GHG emissions. Therefore, if individual projects conform to City building Codes, they will conform with the CAP and would not conflict with local plans, policies, or regulations applicable to GHG emissions. The proposed project would be constructed in conformance with at minimum the 2022 CalGreen and the Title 24 Building Codes, which requires high-efficiency water fixtures, water-efficient irrigation systems, and compliance with current energy efficiency standards. Compliance with these standards ensures compliance with State and federal plans, policies, and regulations applicable to GHG emissions.

Supporting Documentation

Attachment 1 includes the CalEEMod output for project construction and operational criteria air pollutant emissions. Also included are any modeling assumptions.

Attachment 2 includes the City of San José’s CAP Development Compliance Checklist.

Attachment 1: CalEEMod Modeling Inputs and Outputs

Attachment 2: City of San José's CAP Development Compliance Checklist