North Rollins Specific Plan

prepared by

City of Burlingame
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prepared with the assistance of

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July 2023

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Environmental Scientists | Planners | Engineers
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Draft Addendum to the Burlingame 2040 General Plan EIR (SCH #2017082018)

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1 Introduction

This document is an Addendum to the City of Burlingame 2040 General Plan Final Environmental Impact Report (EIR).

In accordance with Section 15164 of the CEQA Guidelines, a Lead Agency shall prepare an Addendum to an EIR if some changes or additions are necessary that will not have significant new impacts or substantially increase previously identified significant impacts. Specifically, the CEQA Guidelines state:

- The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred (Section 15164(a));
- An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration (Section 15164(c));
- The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project (Section 15164(d)); and
- A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence (Section 15164(e)).

This Addendum has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the CEQA Guidelines.

According to Section 15164 of the CEQA Guidelines, an addendum to a previously certified EIR or Negative Declaration is the appropriate environmental document in instances when “only minor technical changes or additions are necessary” and when the new information does not involve new significant environmental effects beyond those identified in the previous EIR.

This Addendum describes the details of the proposed North Rollins Specific Plan (herein referred to as “Specific Plan,” “proposed project,” or “project”) and compares impacts to those identified in the 2018 Draft EIR and the Final EIR that was certified in August 2018 for the 2040 General Plan. The analysis demonstrates that the environmental impacts of the proposed Specific Plan are within the scope of the impacts identified in the 2040 General Plan.

2 Background

The North Rollins Specific Plan area is approximately 88.8 acres of land located in the northern portion of the City of Burlingame (the "City"). The existing land uses in the Specific Plan area are primarily commercial service and retail and the existing zoning is Rollins Road Mixed Use (RRMU). The Specific Plan was designed to create a dynamic mixed-use district with cohesive urban form.

On January 7, 2019, the Burlingame City Council approved the 2040 General Plan, which provides an update to the long-range policy document, which establishes the goals and policies guiding the future development of Burlingame. The City prepared an EIR (State Clearinghouse [SCH] #2017082018) for the 2040 General Plan that evaluated the long-range and cumulative environmental impacts associated with projected development of the Specific Plan area. The Final EIR for the General Plan was certified in August 2018. Within the 2040 General Plan, the City created several goals and policies related to the North Rollins area of the City, which helped craft the newly formed North Rollins Specific Plan (herein referred to as "Specific Plan," "proposed project," or "project"). The proposed Specific Plan will assist in creating a consistent urban form and landscape character for private and public development within the Specific Plan area of the City. Minor changes are proposed under the North Rollins Specific Plan when compared to what was analyzed for the Specific Plan area under the General Plan EIR.

To note, the 2040 General Plan EIR determined impacts to greenhouse gas emissions and noise were found to be significant and unavoidable. Impacts to cultural resources and transportation were found to be potentially significant without the implementation of mitigation measures. However, with implementation of mitigation measures, impacts would be reduced to less-than-significant levels.

The 2040 General Plan's impacts to aesthetics, agriculture and forestry resources, air quality, biological resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services and recreation, tribal cultural resources, and utilities and service systems were found not to be significant in the EIR.

As outlined in Section 15164 (Addendum to an EIR or Negative Declaration) of the CEQA Guidelines, a Lead Agency shall prepare an Addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in the CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred.

As discussed in the impact analysis below, the proposed Specific Plan is substantially similar to the City of Burlingame's previously approved 2040 General Plan discussed and analyzed in the 2040 General Plan Final EIR. The minor modifications between the approved 2040 General Plan and the proposed Specific Plan would not introduce new significant environmental impacts beyond those which have already been identified and characterized in the approved 2040 General Plan Final EIR. None of the conditions described in CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred or would occur as a result of the proposed Specific Plan. Therefore, this Addendum to the 2040 General Plan's Final EIR is consistent with CEQA, and this Addendum is the appropriate level of environmental documentation to provide under CEQA. This Addendum will be considered by the City of Burlingame decision-making body in making a decision on the proposed Specific Plan.

3 Project Description

1. Project Title

North Rollins Specific Plan

2. Project Overview

The North Rollins Specific Plan proposes a mixed-use neighborhood with permitted uses of residential, commercial, open spaces, and industrial uses. The Specific Plan will create a walkable, pedestrian friendly neighborhood and improves connectivity with the Millbrae Transit Center.

The Specific Plan area is designated as "Live/Work" in the "Envision Burlingame" General Plan. The Specific Plan is consistent with the Live/Work designation and envisions converting the existing low-rise industrial area into a dynamic mixed-use, residential, commercial, and industrial neighborhood. The General Plan EIR analyzed the maximum allowable development for the Specific Plan. In particular, the proposed project consists of modifying the allowed intensity within the General Plan by removing a portion of the allowed office and industrial intensity and converting it into multi-family residential units. Specifically, the proposed project would reduce the allowed intensity of office use from 174,083 square-feet to 50,083 square-feet and reduce the allowed intensity of industrial use from 696,331 square-feet to 591,217 square-feet. Further, the proposed project increases the residential intensity from 1,199 multifamily units to 1,557 multifamily units. These changes would result in a net increase of 358 multifamily residential units from what was analyzed in the 2040 General Plan EIR. The project's changes would also entail reductions of 105,114 square feet of industrial use and 124,000 square-feet of office use. Table 1, below, helps illustrate the proposed changes in square footage and new intensity under the proposed project.

Table 1 Development Analyzed in General Plan EIR and Proposed Specific Plan

Land Use Description	Analyzed in General Plan	Project Proposed Change	Difference With Project
Multi-family (dwelling unit)	1,199	358	1,557
Industrial (square feet)	696,331	(105,114)	591,217
Office (square feet)	174,083	(124,000)	50,083
Commercial (square feet)	139,266	-	139,266

3. Project Location

The North Rollins Specific Plan area is approximately 88.8 acres located in the northern portion of the City of Burlingame (herein referred to as "Plan Area" or Specific Plan Area"). The project location in a regional context is shown in Figure 1 and in a neighborhood context is shown in Figure 2. The Specific Plan area is directly bordered on the northeast by the City of Millbrae. The Specific Plan area is regionally accessible via the US Route 101 located directly northeast of the project site and via State Route 82 (El Camino Real) located approximately 0.3 miles southwest of the project site. Interstate 280 is located approximately 1.3 miles southwest of the Specific Plan area. The Plan Area is locally accessible via Broadway, Rollins Road, and Carolan Avenue. The Plan Area is approximately 0.35 miles

southeast from the Millbrae Transit Center. The San Francisco International Airport (SFO) is located approximately one mile north of the Specific Plan area and the entirety of the Specific Plan is within the Comprehensive Airport Land Use Compatibility Plan (ALUCP) for the Environs of SFO.

The physical setting of the Plan Area has been previously graded and disturbed and consists of industrial and office buildings with surface parking lots. The entire Specific Plan Area predominately consists of pavement or buildings, with the exception of a narrow eucalyptus windrow along the CALTrain rail corridor in the northwestern portion of the Specific Plan Area and previously graded areas underneath a Pacific Gas & Electric (PG&E) corridor and at 10 Guittard Road.

4. General Plan and Zoning Consistency

City of Burlingame 2040 General Plan

The project would be located entirely in the City of Burlingame. The 2040 General Plan is the fundamental document governing land use development and includes goals and policies relating to economic development, land use, transportation, public health, open space, conservation, safety, noise, public facilities, and utilities. The proposed project would be required to abide by all applicable goals and policies in the adopted 2040 General Plan. The 2040 General Plan land use designation for the Plan Area is Live/Work. This land use designation is intended to include multifamily residential, office, commercial, and industrial uses. The Specific Plan is consistent with the Live/Work designation as it promotes a medium- to high-density mixed-use neighborhood.

Burlingame Municipal Code and Zoning Code

The Specific Plan implements goals and policies from the City of Burlingame 2040 General Plan designated for the Specific Plan area, and functions as the zoning for the Plan Area. The current zoning for the Specific Plan Area is RRMU. The Specific Plan includes a required zone change from RRMU to The North Rollins Specific Plan (NRSP).

Figure 1 Regional Location

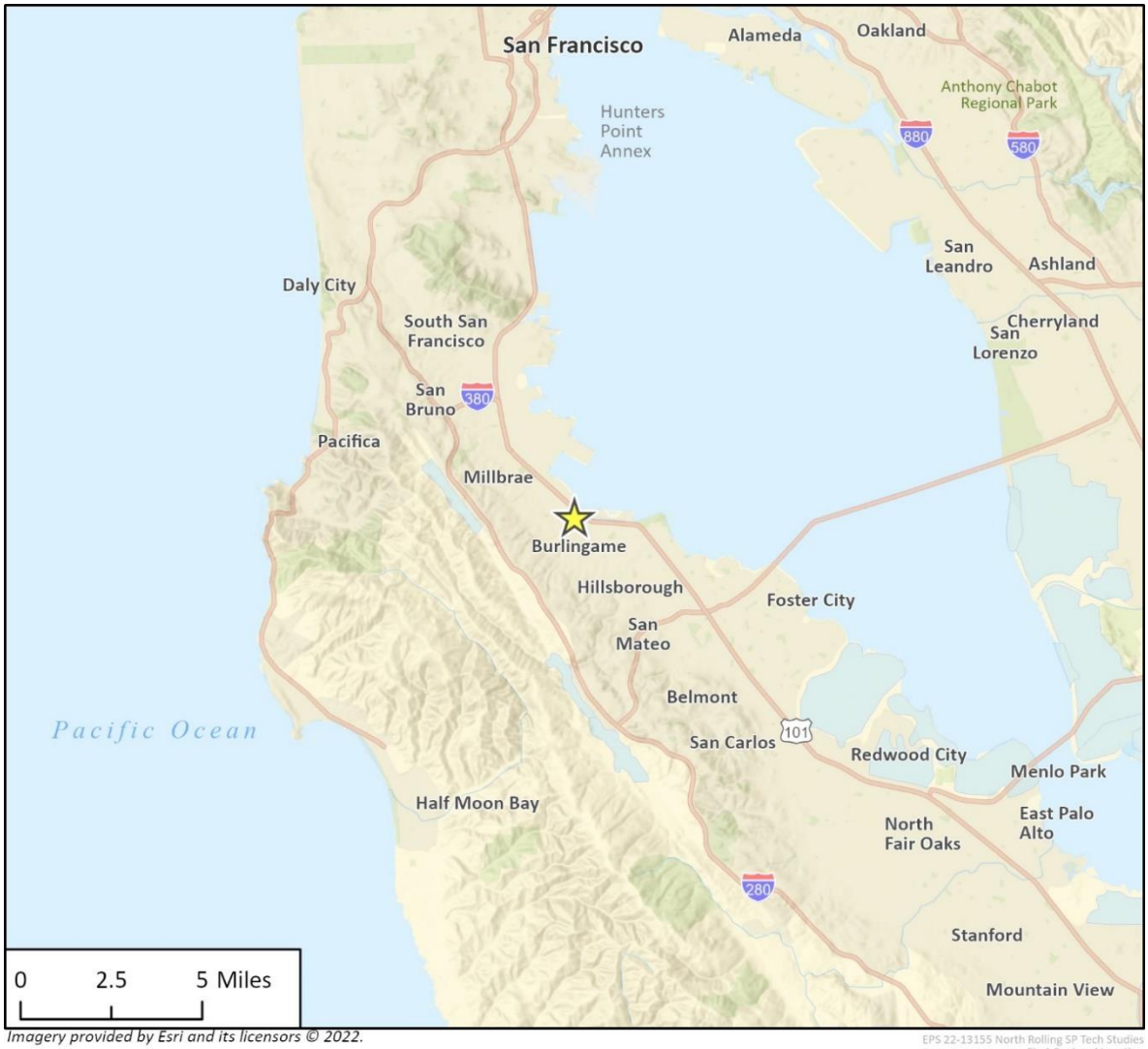
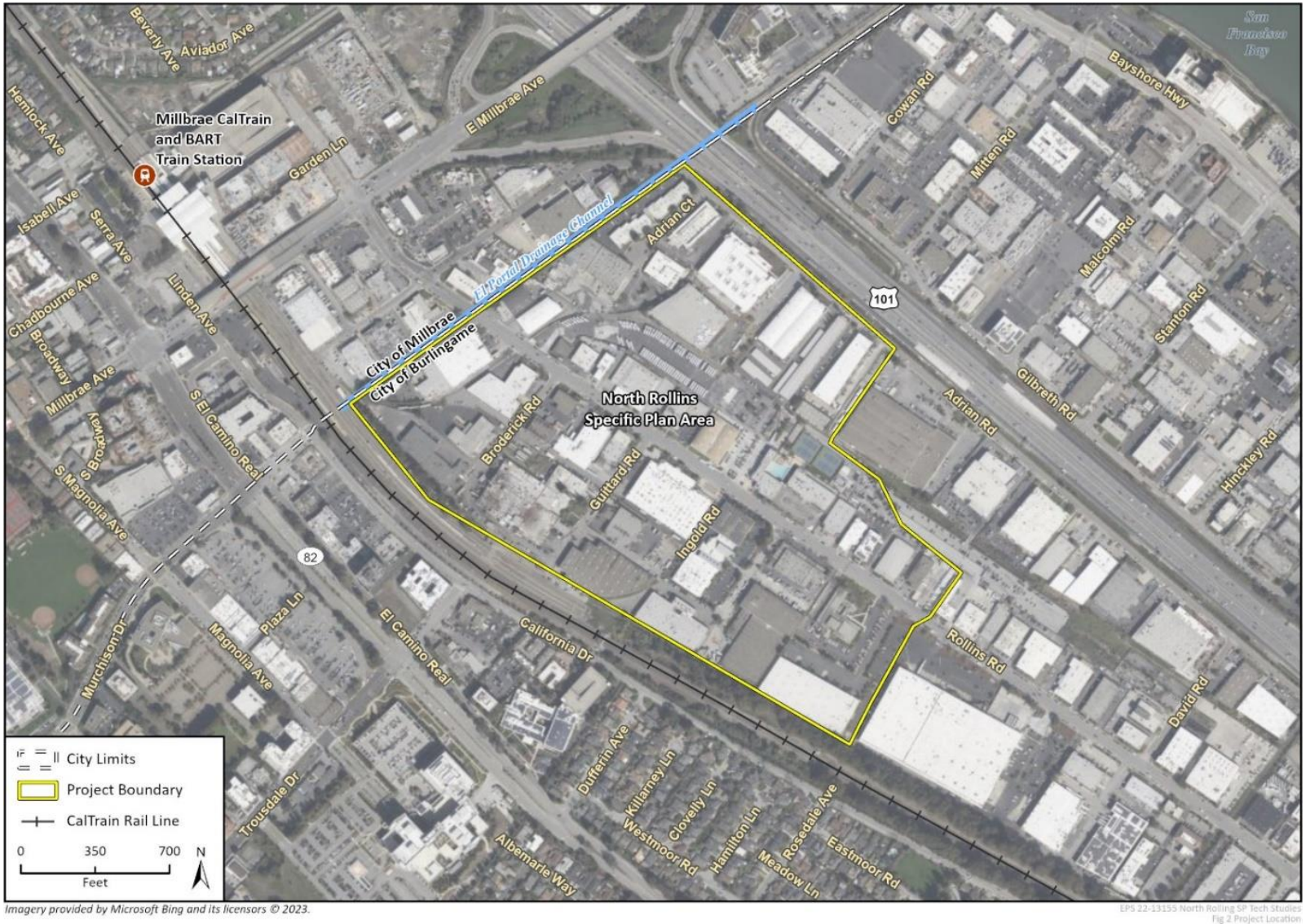


Figure 2 Project Location



4 Environmental Consistency Analysis

This Checklist evaluates potential environmental impacts that could result from the proposed project. The existing environmental conditions in Burlingame are substantially the same under present conditions as described in the Final EIR; the analysis below provides updates where necessary to characterize potential impacts associated with the Specific Plan.

Appendix G of the CEQA Guidelines provides a checklist of environmental issue(s) that are suggested as the issue areas that should be assessed in CEQA analyses. The Final EIR addressed in detail sixteen (16) of the twenty (20) environmental issue areas included in CEQA Guidelines Appendix G. In order to provide a thorough and conservative analysis of potential impacts associated with the proposed project, this document addresses all necessary issue areas included in Appendix G of the CEQA Guidelines, as listed below.

1. Aesthetics
2. Agriculture and Forestry Resources
3. Air Quality
4. Biological Resources
5. Cultural Resources
6. Geology and Soils
7. Greenhouse Gas Emissions
8. Hazards and Hazardous Materials
9. Hydrology and Water Quality
10. Land Use and Planning
11. Noise
12. Population and Housing
13. Public Services
14. Transportation and Traffic
15. Tribal Cultural Resources
16. Utilities and Service Systems
17. Wildfire

Potential environmental impacts of the Specific Plan are analyzed to determine whether impacts are consistent with the impact analysis provided in the General Plan EIR, and whether additional mitigation measures are required to minimize or avoid potential impacts. Where impacts are identified in the following analysis, discussion of existing applicable policies and regulations are also discussed as relevant to the avoidance of potential impacts from the proposed project.

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1. Aesthetics

The 2018 EIR for the 2040 General Plan determined that impacts relating to Aesthetics would be less than significant with no mitigation required (Section 5, *Aesthetics*, of the 2040 General Plan EIR).

Similar to the General Plan, development under the proposed project would be required to comply with relevant regulations and policies from the General Plan and the City of Burlingame Design Guidelines. The Specific Plan is also required to comply with California Streets and Highways Code (Section 260) which preserves Interstate 280, a designated state scenic highway. Compliance with these regulations and policies would ensure that the proposed project would not substantially degrade the existing visual character of the City, damage existing scenic resources, or create new sources of substantial light or glare that would adversely affect daytime or nighttime views. In addition, individual projects under the proposed project require project-level CEQA review, which would identify and require mitigation for any potential site-specific impacts associated with aesthetics.

As a result, the proposed project would not introduce new impacts or substantially increased impacts related to aesthetics and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to aesthetics, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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2. Agriculture and Forestry Resources

The 2018 EIR for the 2040 General Plan determined that impacts relating to Agriculture and Forestry Resources would be less than significant with no mitigation required (Section 6, *Agricultural Resources*, of the 2040 General Plan EIR).

The 2018 EIR for the General Plan determined that there is not Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, land under a Williamson Act contract, or agricultural or forestry land uses within the city limits of Burlingame. The Specific Plan area is within city limits; therefore, it is not considered Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and is not associated with agricultural, or forestry uses. The property is not under a Williamson Act contract.

As a result, the Specific Plan would not introduce new impacts or substantially increased impacts related to agriculture and forestry resources and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to agriculture and forestry resources, and no mitigation measures are necessary.

Conclusion

No Impact (Equal to the certified EIR for the 2040 General Plan)

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3. Air Quality

The following section is based on the results of the Air Quality and Greenhouse Gas Emissions Technical Study that was prepared for the proposed project. The full technical report is provided in Appendix A of this document.

The 2040 General Plan EIR found that the 2040 General Plan would be consistent with the 2017 Clean Air Plan and would not result in an increase in Vehicle Miles Traveled (VMT) that is more than the projected population increase. Thus, the 2040 General Plan would not result in significant increases in criteria air pollutants or precursor pollutant emissions and impacts would be less than significant.

The 2040 General Plan EIR found that although implementation of the 2040 General Plan would result in new sensitive receptors that could be exposed to localized concentrations of TACs of $PM_{2.5}$ and could also result in new sources of TACs that could impact existing sensitive receptors, policies in the 2040 General Plan would ensure potentially adverse community risks and hazards are adequately evaluated and addressed. Therefore, impacts related to TACs and $PM_{2.5}$ would be less than significant.

The 2040 General Plan EIR stated that the 2040 General Plan does not directly authorize any new potential odor sources within the City. However, implementation of the 2040 General Plan would result in new sensitive receptors that could be exposed to odors from existing or new industrial and commercial sources. The Burlingame 2040 General Plan EIR found that policies in the 2040 General Plan would protect residents and employees from odors by ensuring developers mitigate indoor air quality and evaluating the location of new emissions sources and new receptors. Therefore, impacts related to odors would be less than significant (City of Burlingame 2018).

Project Impacts

Impact 1 Increases in Criteria Air Pollutants and Precursor Emissions

CONSISTENCY WITH 2017 CLEAN AIR PLAN

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 periodically. 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 2017b).

The 2017 Plan focuses on two paramount goals (BAAQMD 2017b):

- 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 GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

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

- Supports the primary goals of the 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. The Specific Plan would decrease the amount of office and industrial uses and encourage denser and an increased number of multi-family housing units compared to the General Plan EIR, in a location near the Millbrae Transit Center (located approximately 1,100 feet north of the project area). The Millbrae Transit Center provides access to Caltrain, BART, San Mateo County Transit (SamTrans), and local community shuttle services. By allowing for the easier use of alternative modes of transportation through proximity to services, jobs, bus stops, BART stations, and bicycle routes, development facilitated by the project would reduce the use of personal vehicles and subsequent mobile emissions than if development were placed further from transit.

In addition, development facilitated by the project would be required to comply with the latest Title 24 regulations, including requirements for residential indoor air quality. The analysis is based on compliance with 2022 Title 24 requirements although individual projects developed under the plan would be required to comply with the most current version of Title 24 at the time of project construction. These requirements currently mandate Minimum Efficiency Reporting Value 13 (or equivalent) filters for heating/cooling systems and ventilation systems in residences (Section 150.0[m]) or implementation of future standards that would be anticipated to be equal to or more stringent than current standards. Therefore, the project would improve air quality compared to development farther from transit and services through reducing VMT and would protect public health through stringent requirements for MERV-13 filters or equivalent indoor air quality measures, which would be consistent with the primary goals of the 2017 Clean Air Plan.

As shown in Appendix A, the proposed project would be consistent with the applicable measures as development facilitated by it would be required to comply with the latest Title 24 regulations and would increase density in urban areas, allowing for greater use of alternative modes of transportation. Development facilitated by the project does not contain elements that would disrupt or hinder implementation of a 2017 Clean Air Plan control measures. Therefore, the project would conform to this determination of consistency for the 2017 Clean Air Plan and would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

CRITERIA AIR POLLUTANT EMISSIONS - CONSTRUCTION

Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROGs and NO_X emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the number of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated

materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. According to the 2017 BAAQMD *CEQA Air Quality Guidelines,* PM_{10} is the greatest pollutant of concern during construction (BAAQMD 2017a).

As discussed above, BAAQMD's 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutant emissions that would apply to the project. However, the guidelines include project-level thresholds for construction emissions. If an individual project is subject to CEQA and has construction emissions that fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. The BAAQMD has identified feasible fugitive dust control measures for construction activities and recommends implementation of eight Basic Construction Mitigation Measures to reduce fugitive dust levels. Future development facilitated by the Specific Plan would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan. Policy HP-3.10 ensures projects that generate truck traffic and existing truck routes avoid sensitive land uses to reduce sensitive receptor exposure to dust and exhaust emissions from trucks; Policy HP-3.11 requires dust abatement actions for all new construction to reduce fugitive dust and PM_{10} emissions from construction activities; and Policy HP-3.12 requires projects to implement BAAQMD's Basic Construction Mitigation Measures to reduce pollution from dust and exhaust. Therefore, similar to the finding in the 2040 General Plan EIR, construction emission impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

FUGITIVE DUST EMISSIONS

Site preparation and grading during construction activities facilitated by development under the proposed project may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The BAAQMD has not established a quantitative threshold for fugitive dust emissions but rather states that projects that incorporate best management practices (BMPs) for fugitive dust control during construction would have a less than significant impact related to fugitive dust emissions. As described above, future development facilitated by the project would be required to comply with Goal HP-3 and Policies HP-3.10 through 3.12 of the Healthy People, Healthy Places Element of the 2040 General Plan, which requires implementation of dust abatement actions and BAAQMD's Basic Construction Mitigation Measures. Therefore, similar to the finding in the 2040 General Plan EIR, fugitive dust emission impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

CRITERIA AIR POLLUTANT EMISSIONS – OPERATION

The proposed project would accommodate new residential, commercial, and industrial uses that will operate through the Specific Plan horizon year of 2040. Long-term criteria pollutant emissions would result from the operation of potential residential, retail, and light industrial uses supported by the North Rollins Specific Plan. Operational air quality emissions are evaluated in terms of area source emissions, energy demand emissions, and mobile emissions. Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of a project. Energy demand emissions result from use of electricity and natural gas. Mobile emissions result from automobile and other vehicle sources associated with daily trips to and from the project vicinity.

The project would provide 358 more multi-family residential units than allowed under the 2040 General Plan, for a total of 1,557 multi-family residential units. As shown in Table 7-8 of the Burlingame 2040 General Plan EIR, the 2040 General Plan would likely lead to increases in emissions in the SFBAAB, and the s Specific Plan would most likely result in similar emissions since it would increase the number of residential units but decrease the amount of office and industrial uses. Nonetheless, development of future projects within the planning area would be subject to the City's standard CEQA review process and would be required to assess project-specific emissions in relation to the BAAQMD significance thresholds.

Additionally, future development would be required to comply with Policy HP-2.7 of the Healthy Places Element of the 2040 General Plan, which encourages homeowners to install solar power systems; Policy HP-3.1, which ensures compliance with BAAQMD regulations and air quality standards; Policy HP-3.3, which require future developers mitigate impacts on indoor air quality for new residential development; and Policy HP-3.5, which encourages residents to replace wood-burning fireplaces and stoves with cleaner electric heat pumps, natural gas, or propane stoves. Future development would also be required to comply with the 2040 General Plan's Community Character, Mobility, and Infrastructure Elements, which contain land use, transportation, and infrastructure policies that would provide air quality benefits from sustainable land use planning and design consideration, complete streets and other mobility considerations that would reduce vehicle trips, and infrastructure planning to support alternative means of transportation. Therefore, similar to the finding in the Burlingame 2040 General Plan EIR, operational emissions impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

PROJECT VMT AND POPULATION GROWTH

According to the BAAQMD 2017 *CEQA Air Quality Guidelines,* the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT versus population growth. The project would add 358 multi-family dwelling units to the area. Per the project's VMT screening evaluation, the project only has a 3.4 VMT per resident/capita compared to the County's baseline value of 13.52 VMT per resident/capita (Urban Crossroads 2022). This much lower number demonstrates the VMT efficiency of the Specific Plan area that would place future residents in a dense, urban environment near alternative modes of transportation. Therefore, the project's VMT would not conflict with the BAAQMD's 2017 *CEQA Air Quality Guidelines* operational plan-level significance thresholds for criteria air pollutants and would be consistent with the 2017 Clean Air Plan. Accordingly, impacts would be less than significant, and the project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Impact 2 Community Risks and Hazards

CARBON MONOXIDE HOTSPOTS

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. The entire Basin is in conformance with state and federal CO standards, as indicated by the recent air quality monitoring. There are no current exceedances of CO standards within the air district and the Bay Area has not exceeded CO standards since before 1994.1 For 2019, the Bay Area's reported maximum 1-hour and average daily concentrations of CO were 5.6 ppm and 1.7 ppm respectively (BAAQMD 2019). These are well below the respective 1-hour and 8-hour standards of 20 ppm and 9

[1] BAAQMD only has records for annual air quality summaries dating back to 1994.

ppm. Given the ambient concentrations, which includes mobile as well as stationary sources, a project in the Bay Area would need to emit concentrations three times the hourly maximum ambient emissions for all sources before project emissions would exceed the 1-hour standard. Additionally, the project would need to emit seven times the daily average for ambient concentrations to exceed the 8-hour standards. Typical development projects, even plan level growth, would not emit the levels of CO necessary to result in a localized hot spot. Therefore, impacts to CO hotspots would be less than significant, consistent with the findings in the Burlingame 2040 General Plan EIR. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

TOXIC AIR CONTAMINANTS

In the Bay Area, there are several urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. According to BAAQMD *CEQA Guidelines* (Figure 5-1), the City 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). Operation of development facilitated by the project would not involve these uses; therefore, it is not considered a source of TACs. Furthermore, residences do not typically include new stationary sources onsite, such as emergency diesel generators. However, if residences did include a new stationary source onsite, it would be subject to BAAQMD Regulation 2, Rule 2 (New Source Review) and require permitting. This process would ensure that the stationary source does not exceed applicable BAAQMD health risk thresholds.

As discussed in the 2040 General Plan EIR, the 2040 General Plan would not result in a significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs and $PM_{2.5}$, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways. Moreover, the CARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses within:

- 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- 300 feet of dry cleaning operations;
- 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- 1,000 feet of a major rail service or maintenance yard.

Although the 2040 General Plan Land Use Diagram and the Specific Plan Land Use Diagram do not graphically depict overlay zones around specific, existing sources of TACs, future development facilitated by the Specific Plan would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan which clearly state guidelines for projects and areas of the City where risks would be minimized, and ensure reduction of potential TAC emissions and associated adverse health risk impacts to a less than significant level. Policy HP-3.2 requires Transportation Demand Management (TDM) techniques when air quality impacts are unavoidable; Policy HP-3.3 requires future developers mitigate impacts on indoor air quality for new residential development by installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers; Policy HP-3.7 prevents locating stationary and mobile sources of air pollution near sensitive receptors; Policy HP-3.8 prevents locating residential developments near significant pollution sources and requires BAAQMD recommended procedures for

air modeling and health risk assessment for new sensitive land uses located near sources of TACs; and Policy HP-3.9 ensures placing sensitive uses as far away from emission sources as possible. Therefore, operational impacts from TAC emissions would be less than significant, consistent with the findings in the Burlingame 2040 General Plan EIR. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

ASBESTOS

BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities (BAAQMD 2017a). The rule addresses the national emissions standards for asbestos along with some additional requirements. The rule requires the Lead Agency and its contractors to notify BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Therefore, individual projects that comply with Regulation 11, Rule 2 would ensure that asbestos-containing materials would be disposed of appropriately and safely. By complying with BAAQMD Regulation 11, Rule 2, thereby minimizing the release of airborne asbestos emissions, demolition activity would not result in a significant impact to air quality. Per the BAAQMD Guidelines, because BAAQMD Regulation 11, Rule 2 is in place, no further analysis about the demolition of asbestos-containing materials is needed in a CEQA document (BAAQMD 2017).

Impact 3 Odors

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust both during normal use and when idling. However, these odors would be temporary and transitory and would cease upon completion. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people.

Appendix A provides BAAQMD odor screening distances for land uses with the potential to generate substantial odor complaints. Those uses include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants. As development facilitated by the project compared to the 2040 General Plan would be increased residential and reduction in industrial and office uses, none of the identified uses would occur. Additionally, future development would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan that outline guidelines to protect residents and employees from harmful pollutants, including odors. Policy HP-3.2 requires local businesses, industries, and developers to reduce the impact of stationary and mobile sources of odors; Policy HP-3.3 requires future developers mitigate impacts on indoor air quality for new residential development by installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers; Policy HP-3.7 ensures stationary and mobile sources of air pollutants such as odors are not located near sensitive receptors; and Policy HP-3.9 outlines requirements for building site design and operations to place sensitive uses within development projects away from sources of emission, including odors. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people. This impact would be less than significant and consistent with the findings in the 2040 General Plan EIR.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to air quality, and no mitigation measures are necessary.

Conclusion

Less than Significant (Equal to the certified EIR for the 2040 General Plan)

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4. Biological Resources

The 2018 EIR for the 2040 General Plan determined that impacts relating to Biological Resources would be less than significant with no mitigation required (Section 8, *Biological Resources*, of the 2040 General Plan EIR).

Similar to the General Plan, changes proposed under the proposed project would occur in already developed, urbanized areas, which do not support a wide diversity of biological species. Similar to the findings of the General Plan EIR, Specific Plan impacts relating to interference with the movement of native resident or migratory fish and wildlife species, compliance with tree preservation policies or ordinances, and compliance with provisions of an approved local, regional, or State habitat conservation would be less than significant with no mitigation required. In addition, individual projects under the proposed Specific Plan would require project-level CEQA review, which would identify and require mitigation for any potential site-specific impacts associated with biological resources.

As a result, the proposed project changes would not introduce new impacts or substantially increased impacts related to biological resources and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to biological resources, and no new mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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5. Cultural Resources

The 2018 EIR for the 2040 General Plan determined that impacts relating to Cultural Resources would be less than significant with implementation of mitigation measure CR-1 (Section 12, *Historic and Cultural Resources*, of the 2040 General Plan EIR).

Similar to the General Plan, future development associated with the implementation of the Specific Plan changes could impact Tribal Cultural Resources (TCRs) where excavation and other earthmoving activities would be required. Failure to properly survey development sites and, if necessary, monitor earthmoving activities to ensure identification and recovery of TCRs or archaeological artifacts associated with TCRs could result in a significant impact due to the loss of information related to prehistoric human activities. The City currently does not have policies directly relating to the protection of TCRs during development and related earthmoving activities. Therefore, mitigation measures would be required to avoid or minimize impacts to buried archaeological resources associated with TCRs. Mitigation Measure CR-1 would be incorporated and would be applicable in the event of the unanticipated discovery of TCRs or archeological resources associated with TCRs to reduce potentially significant impacts to such resources. This mitigation measure would ensure that newly discovered TCRs and their related artifact(s) found within the Specific Plan Area would reduce significant impacts to a less than significant level.

In addition, individual projects under the Specific Plan would require project-level CEQA review, which would identify and require mitigation for any potential site-specific impacts associated with cultural resources. If future development under the Specific Plan is found to have potentially adverse impacts on cultural or paleontological resources, implementation of Mitigation Measure CR-1 would reduce these impacts to less than significant. Therefore, proposed changes to the Specific Plan under the proposed project would not introduce new impacts or substantially increased impacts related to Cultural Resources and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to cultural resources, and no new mitigation measures are necessary.

Conclusion

Less than Significant Impact with Mitigation (Equal to the certified EIR for the 2040 General Plan)

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6. Geology and Soils

The 2018 EIR for the 2040 General Plan determined that Geology and Soils impacts resulting from the General Plan would be less than significant with no mitigation required (Section 9, *Geology, Soils, and Minerals,* of the General Plan EIR).

Similar to the General Plan, development facilitated under the proposed project would generate less than significant impacts related to geotechnical hazards or seismic-related ground failure (i.e., surface rupture, ground shaking, liquefaction, landslides, erosion, landslides, subsidence, or expansive soils). However, during a seismic event, adverse impacts related to seismic-related ground failure and shaking could still occur. Therefore, to reduce impacts to less than significant, new buildings on the project site would be required to meet the latest California Building Code (CBC) building requirements related to current energy, safety, and fire provisions. New buildings would also be subject to the ABAG Multi-Jurisdictional Local Hazard Mitigation Plan, Chapter 18.28 of the City of Burlingame Municipal Code, and City of Burlingame Community Safety Element of the General Plan.

Therefore, the Project would not introduce new impacts or substantially increased impacts related to geology and soils and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to geology and soils, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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7. Greenhouse Gas Emissions

The following section is based on the results of the Air Quality and Greenhouse Gas Emissions Technical Study that was prepared for the proposed project. The full technical report is provided in Appendix A of this document.

The 2040 General Plan EIR found that the City's community-wide emissions are projected to meet BAAQMD's efficiency metric for 2020 despite being unable to meet their established goal of reducing community-wide emissions in 2020 to 15 percent below 2005 levels. Additionally, although the City's emissions would be consistent with the 2017 Scoping Plan's annual efficiency target for 2030, annual GHG emissions in 2040 would be inconsistent by approximately 1.3 MT CO_2e per capita. Based on the regulations and policies in the 2040 General Plan, it was determined to be unclear whether the City of Burlingame would be able to achieve the State's long-term goal of reducing GHG emissions to 60 percent below 1990 levels by 2040 and 80 percent below 1990 levels by 2050. Even with implementation of Mitigation Measure 10-1, which required the implementation of additional policies for bicycle sharing, increasing the usage of available shuttles, and increasing ECO100 enrollment within the 2040 General Plan, impacts would still be significant and unavoidable since the City was unable to conclusively demonstrate that implementation of the 2040 General Plan would not generate GHG emissions that exceed the City's existing Year 2020 and future Year 2030 and Year 2040 GHG reduction goals.

The 2040 General Plan EIR found that the 2040 General Plan would conflict with the 2017 Scoping Plan since it would be inconsistent with the State GHG reduction goals and therefore would not support the overarching goals of the 2017 Scoping Plan; Plan Bay Area 2040 since it cannot be assured that the implementation of the Downtown Specific Plan (adopted in 2010) and the North Burlingame/Rollins Road Specific Plan (amended in 2007) would reduce per capita passenger vehicle and light duty truck CO2 emissions by seven percent by 2020 and 15 percent by 2035, as compared to the 2005 baseline, and therefore would be inconsistent with the Plan Bay Area 2040 goal to reduce per capita CO_2 emissions from passenger vehicles and light duty trucks by 15 percent by 2035; and lastly the 2017 Clean Air Plan since it would be inconsistent with the Plan's goal to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Therefore, the 2040 General Plan would be inconsistent with the above-mentioned plans and impacts would be significant and unavoidable.

Impact 1 Increases in GHG Emissions & Impact 2: GHG Plan Consistency

Project Consistency with 2030 CAP Update

Appendix A to this document shows the project's consistency with applicable 2030 CAP Update actions. As shown, the proposed project would be consistent with applicable actions from the City's 2030 CAP Update. As discussed in Appendix A, BAAQMD's updated thresholds state that a plan-level project would have less than significant impact if it would be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). Since the 2030 CAP Update is a qualified CAP, and the proposed project would be consistent with applicable actions within, this impact would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Project Consistency with 2022 Scoping Plan

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045 and reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The proposed project would be consistent with these goals since future development would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the AB 341 waste diversion goal of 75 percent and recycle organic wastes pursuant to SB 1383. Future development facilitated by the project would also be located in proximity to the Millbrae Transit Center which would reduce reliance on single-occupancy vehicles and VMT. The City's Reach Code also requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, future development would receive electricity from PCE, which sources 100 percent GHG free electricity under its ECOplus base plan. Therefore, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Potential Emissions Generated by the Proposed HEU

Since the City's Reach Code requires all-electric construction for future residential and commercial uses, it was assumed that the natural gas demand estimated for the project excluding industrial uses would instead be supplied by electricity to account for increased electricity usage. As shown in Appendix A, the proposed project would generate 13,977 $MTCO_2e$ per year, which would increase the number of emissions compared to existing conditions under the 2040 General Plan by 353 $MTCO_2e$ per year. A 3 percent increase in GHG emissions would represent a minor, incremental increase in GHG emissions, and would not substantially increase or exacerbate the significant and unavoidable findings in the of the 2040 General Plan EIR.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to greenhouse gas emissions, and no mitigation measures are necessary.

Conclusion

Significant and Unavoidable Impact (Equal to the certified EIR for the 2040 General Plan)

8. Hazards and Hazardous Materials

The 2018 EIR for the 2040 General Plan determined that Hazards and Hazardous Materials impacts resulting from development would be less than significant with no mitigation required (Section 11, *Hazards and Hazardous Materials* , of the General Plan EIR).

Similar to the General Plan EIR, development facilitated by the changes under the Specific Plan would generate less than significant impacts related to hazards or hazardous materials. Development-related activities associated with the proposed Specific Plan would be similar to those of the 2040 General Plan and would be subject to compliance with existing Federal and State regulations and the regulations and policies relevant to hazards and hazardous materials in the General Plan to minimize or avoid potential impacts caused by hazards and hazardous materials. Furthermore, individual projects under the proposed Specific Plan would require individual project-level CEQA review, which would identify any required mitigation for potential site-specific impacts. Therefore, the proposed project would not introduce new impacts or substantially increased impacts related to hazards and hazardous materials and would be consistent with the impact analysis provided in the 2018 EIR for the General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to hazards and hazardous materials and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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9. Hydrology and Water Quality

The 2018 EIR for the 2040 General Plan determined that Hydrology and Water Quality impacts resulting from development would be less than significant with no mitigation required (Section 13, *Hydrology and Water Quality*, of the General Plan EIR).

Construction and operation of future development under the General Plan could result in discharges of hazardous materials or sediment, which could contaminate downstream waters. However, development under the General Plan would be required to comply with required Laws, Permits, Ordinances, and plans, including an MS4 Permit and best management practices (BMPs), which would reduce potential impacts to a less than significant level.

Similar to the General Plan, development under the proposed project would generate little or no increase in runoff to the existing drainage system since the Plan Area is already covered in impervious surfaces. Therefore, implementation of the proposed project changes would not directly trigger the need for upgrading the City's existing storm drain facilities, and existing State regulations and the regulations and policies relevant to hydrology and water quality in the General Plan would stabilize and/or reduce runoff in the City.

As a result, the project would not introduce new impacts or substantially increased impacts related to hydrology and water quality and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be considered less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to hydrology and water quality, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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10. Land Use and Planning

The 2018 EIR for the 2040 General Plan determined that Land Use and Planning impacts resulting from the General Plan would be less than significant with no mitigation required (Section 14, *Land Use and Planning* of the General Plan EIR).

The General Plan EIR determined that development facilitated by the General Plan would not physically divide an established community or conflict with any land use plan, policy, or regulation. Similar to the 2040 General Plan, development facilitated by changes in the overall scope of the Specific Plan Area is not expected to physically divide an established community or conflict with any land use plan, policy, or regulation. The proposed project would not conflict with the 2040 General Plan, City of Burlingame Municipal Code, and the ALUCP for the Environs of SFO. The Specific Plan includes a zoning change from RRMU to NRSP, with approval of this zoning change the Specific Plan will maintain compliance with the City of Burlingame Zoning Code.

Therefore, the proposed project would not introduce new impacts or substantially increased impacts related to land use and planning and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to land use, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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11. Noise

The following section is based on the results of the Noise Technical Study that was prepared for the proposed project. The full technical report is provided in Appendix B of this document.

The 2040 General Plan EIR found that the 2040 General Plan would result in a potentially significant impact from construction noise, which would be mitigated through Mitigation measure 15-1 to less than significant through an expanded General Plan Policy CS-4.10 to implement Construction Noise Studies. The 2040 General Plan EIR determined that construction vibration impacts would be less than significant.

The 2040 General Plan EIR determined that increases in traffic noise levels would result in a potentially significant impact since roadway noise levels would increase by more than 3 dBA on certain roadways (which were outside of the Specific Plan area), and that no feasible mitigation existed to reduce these noise levels. In addition, it found that noise levels to future sensitive receivers could be significant and unavoidable. The 2040 General Plan EIR also determined that airport noise would result in a less than significant impact.

The 2040 General Plan EIR found that impacts from operational noise, such as mechanical equipment and leaf blower noise, would result in less than significant impacts through implementation of General Plan policies.

Project Impacts

Noise

CONSTRUCTION

Noise from individual construction projects facilitated by the project would temporarily increase noise levels at nearby sensitive receivers. Since at this stage of planning project-level, details are not available for future projects that would be carried out under the project, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. However, noise estimates for typical construction activities have been provided below.

Construction activities would generate noise from phases such as demolition, site preparation, grading, building construction, and paving activities. Each phase of construction has a specific equipment mix and associated noise characteristics, depending on the equipment used during that phase. Construction noise would typically be higher during the more equipment-intensive phases of initial construction (i.e., demolition, site preparation, and grading work) and would be lower during the later construction phases (i.e., building construction and paving). Appendix B illustrates typical noise levels associated with construction equipment at a distance of 25 feet.

Neither the BMC nor the City 2040 General Plan contain quantitative limits for construction noise. In lieu of City-specific standards, the FTA criteria for assessing construction noise impacts are used. For residential, commercial, and industrial uses, the FTA daytime noise threshold is 80 dBA L_{eq}, 85 dBA L_{eq}, and 90 dBA L_{eq} for an 8-hour period, respectively.

Noise would typically drop off at a rate of about 6 dBA per doubling of distance. Therefore, noise levels are about 6 dBA lower than shown in Appendix B at 50-feet from the noise source and 12 dBA lower at a distance of 100 feet from the noise source. As shown in these noise levels, construction

noise may exceed the FTA's daytime noise limits, depending on the equipment used and the distance in which the equipment is operating compared to noise-sensitive receptors. Therefore, impacts would be potentially significant.

OPERATION

Stationary (On-site Operational) Noise

Stationary and other sources of noise in Burlingame include those associated with the standard operation of land uses. These sources could include, but are not limited to, landscape and building maintenance activities, stationary mechanical equipment (e.g., pumps, generators, HVAC units), garbage collection activities, commercial and industrial activities, and other stationery and area sources such as people's voices, amplified music, and public address systems.

Noise generated by residential or commercial uses are generally short-term and intermittent in nature. Industrial uses may generate noise on a more continual basis due to the nature of their activities. The proposed Specific Plan adjustments would provide for increase in residential development with the Specific Plan area through the removal of potential office uses. Residential development tends to have lower noise levels associated than other proposed uses, such as industrial or commercial uses.

- **CS-4.2: Residential Noise Standards.** Require the design of new residential development to comply with the following noise standards:
  - The maximum acceptable interior noise level for all new residential units (single-family, duplex, mobile home, multi-family, and mixed-use units) shall be an L_{dn} of 45 dBA with windows closed.
  - For project locations that are primarily exposed to noise from aircraft, Caltrain, BART, US 101, and Interstate 280 operations, the maximum instantaneous noise level in bedrooms shall not exceed 50 dBA at night (10:00 P.M. to 7:00 A.M.), and the maximum instantaneous noise level in all interior rooms shall not exceed 55 dBA during the day (7:00 A.M. to 10:00 P.M.) with windows closed.

In addition, the BMC limits noise from certain common stationary and other sources such as speakers (Section 10.40.020), lawnmowers (Section 10.40.037), leaf blowers (Section 10.40.038), loading and unloading activities (Section 10.40.039), and mechanical equipment including HVAC and generators (Section 25.58.050).

2040 General Plan Policy CS-4.2 would protect residents from excessive noise by requiring the City to review the location of new noise-sensitive land uses, locate such land uses away from major noise sources, and ensure new land uses meet the City's noise standards through evaluation and design considerations. In addition, stationary and other sources of noise would be controlled by the City's Municipal Code, which provide requirements for certain non-transportation noise sources. Therefore, future stationary noise sources would comply with City standards and would not expose people to excessive noise levels. This would be a less-than-significant impact, and the project would not result in new or substantially more significant impacts regarding on-site or off-site construction noise than those identified in the 2040 General Plan EIR.

Mobile (Off-Site Operational) Noise

The implementation of the Specific Plan would have the potential to change the existing amounts and types of land uses within the City. These potential land use changes would increase residents and employees within the City. This increase in population and employment would lead to increased vehicle traffic on the local roadway system, which would result in an increase in traffic-related noise levels. The 2040 General Plan EIR analyzed traffic noise increases from implementation of the 2040 General Plan, with the only roadway analyzed through the Specific Plan area being Rollins Road, as shown in Appendix B.

The 2040 General Plan would increase traffic on Rollins Road by 1.2 CNEL from the addition of 746 ADT, which would be below a barely perceptible increase of 3 dBA. For a 3 dBA increase to occur, traffic would need to be increased by 100 percent, or 7,456 additional ADT. According to the air quality modeling outputs conducted by the project's Air Quality and Greenhouse Gas Emissions Technical Report (Rincon 2023), the change in uses for the Specific Plan area between what was approved under the 2040 General Plan and what is proposed (removal of some office uses and addition of multi-family), the proposed project would result in an increase in trips. This minor increase would increase noise levels by an additional several tenths on Rollins Road but would not increase noise traffic noise levels to where they exceed a 3 dBA increase. Therefore, traffic noise level increases from the project would be less than significant. The project would not result in new or substantially more significant impacts regarding off-site traffic noise than those identified in the 2040 General Plan EIR.

MITIGATION MEASURES

Implementation of 2040 General Plan Policy CS-4.10, as expanded upon in Mitigation Measure 15-1 in the 2040 General Plan EIR, would reduce construction noise and associated impacts:

Mitigation Measure NOI-1 Construction Noise Study

All development projects shall be subject to the applicable construction hour limitations established by the City's Municipal Code. Development projects that are subject to discretionary review and that are located near noise-sensitive land uses shall assess potential construction noise levels and minimize substantial adverse impacts by implementing feasible construction noise control measures that reduce construction noise levels at sensitive receptor locations. Such measures may include, but are not limited to:

- Construction management techniques (e.g., siting staging areas away from noise-sensitive land uses, phasing activities to take advantage of shielding/attenuation provided by topographic features or buildings, monitoring construction noise);
- Construction equipment controls (e.g., ensuring equipment has mufflers, use of electric hook-ups instead of generators);
- Use of temporary sound barriers (equipment enclosures, berms, walls, blankets, or other devices) when necessary; and
- Monitoring of actual construction noise levels to verify the need for noise controls.

SIGNIFICANCE AFTER MITIGATION

Although specific construction activities and noise levels associated with future development projects are not known at this time, implementation of Mitigation Measure NOI-1 would require feasible construction noise control measures when development occurs near noise-sensitive land uses and

would render potential construction noise impacts from future development projects a less than significant impact with mitigation. With mitigation, the project would not result in new or substantially more significant impacts regarding construction noise than those identified in the 2040 General Plan EIR.

Vibration

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and high levels of vibration can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions and sleeping. Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of very hard materials (e.g., compacted soils, bedrock) that must be loosened and/or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site.

Construction equipment and activities are categorized by the nature of the vibration it produces. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate repeated impact vibration include impact pile drivers, and crack-and-seat equipment. Pile driving and blasting activities produce the highest levels of ground vibration and can result in structural damage to existing buildings. Since project specific information is not available at this time, potential short-term construction-related vibration impacts can only be evaluated based on the typical construction activities associated with the development. Future development as a result of the proposed Specific Plan would occur in primarily urban settings where land is already disturbed and, therefore, are not likely to require blasting, which is typically used to remove unwanted rock or earth; however, it is possible that pile driving could occur during building construction under the proposed Specific Plan. Standard construction equipment (e.g., bulldozers, trucks, jackhammers, etc.) generally do not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receivers.

Specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. Vibration levels dissipate rapidly with distance, such that even maximum impact pile driving activities would result in vibration levels below Caltrans' recommended 0.5 PPV threshold for transient vibration-induced damage in historic, older buildings at a distance 100 feet; all other activities would be below Caltrans' 0.25 PPV threshold for continuous vibration-induced damage in historic, older buildings at a distance of 100 feet. For human responses, maximum impact pile driving activities would result in groundborne vibration and noise levels below Caltrans' threshold for a distinctly perceptible response (0.24 PPV in/sec) and the FTA's vibration standard for infrequent events at residential lands (80 VdB) at a distance of approximately 150 feet and 300 feet, respectively; other activities may be barely to distinctly perceptible when occurring within approximately 150 feet of sensitive land uses. Most construction equipment does not operate in the same location for

prolonged periods of time. Therefore, even if construction equipment were to operate near a building where receptors may feel vibration, it would only be for a temporary amount of time. Nonetheless, depending on the specific equipment in use and proximity of the equipment to vibration sensitive land uses, vibration levels may exceed accepted levels at which building damage may occur or which may be perceived by sensitive receptors as excessive. Although project-specific construction activities and noise levels associated with future development projects are not known at this time, proposed 2040 General Plan Policy CS-4.13 requires an assessment of potential impacts and the application of vibration control measures to avoid damage to structures and disturbance of sensitive receptors. The implementation of this policy would render potential construction vibration impacts from future development projects under the Specific Plan to a less than significant impact, and the project would not result in new or substantially more significant impacts regarding construction vibration than those identified in the 2040 General Plan EIR.

- **CS-4.13: Vibration Impact Assessment.** Require a vibration impact assessment for proposed projects in which heavy-duty construction equipment would be used (e.g., pile driving, bulldozing) within 200 feet of an existing structure or sensitive receptor. If applicable, require all feasible mitigation measures to be implemented to ensure that no damage or disturbance to structures or sensitive receptors would occur.

Residential, commercial, and industrial land uses facilitated by changes under the Specific Plan would not involve substantial vibration sources associated with operation. Therefore, Specific Plan operational vibration impacts would be less than significant, and the project would not result in new or substantially more significant impacts regarding operational vibration than those identified in the 2040 General Plan EIR.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to noise and vibration, and no new mitigation measures are necessary.

Conclusion

Significant and Unavoidable (Equal to the certified EIR for the 2018 GPU)

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12. Population and Housing

The 2018 EIR for the 2040 General Plan determined that Population and Housing impacts resulting from the General Plan would be less than significant with no mitigation required (Section 16, *Population and Housing*, of the General Plan EIR).

The General Plan EIR determined that development facilitated by the General Plan would not induce unplanned population growth or displace substantial numbers of existing people or housing. Similar to the 2040 General Plan, development facilitated by the Specific Plan is not expected to induce unplanned population growth or displace substantial numbers of existing people or housing. Any population increase facilitated by the implementation of the Specific Plan would be considered planned. Existing population and housing are not anticipated to be displaced by the proposed Specific Plan. Therefore, the proposed project would not introduce new impacts or substantially increased impacts related to population and housing and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to population and housing, and no new mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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13. Public Services

The 2018 EIR for the 2040 General Plan determined that Public Services impacts resulting from development would be less than significant with no mitigation required (Section 17, *Public Services*, of the General Plan EIR).

The General Plan EIR determined that development facilitated by the General Plan would not increase demand for fire and police protection services and facilities, libraries, and school facilities. Similar to the 2040 General Plan, development under the proposed Specific Plan would occur in previously disturbed, developed urban areas of the City that are served by existing public services and facilities. The nearest police station is the Burlingame Police Department located directly adjacent to the southwest border of the Specific Plan area, and the nearest fire station is the Central County Fire Department, Station 36, located 0.5 mile southeast of the Specific Plan. The schools closest to the Specific Plan area include Stepping Stone Pre School (approximately one mile south of the project area), McKinley Elementary School (approximately one mile south of the project area), Burlingame High School (approximately one mile southeast of the project area), Roosevelt Elementary School (approximately one mile southwest of the project area), and Peninsula High School (approximately 1.25 miles northwest of the project area).

The proposed project is expected to increase density by 358 units. The increase of 358 units would be adequately served by existing facilities, therefore, development facilitated by the proposed project is not expected to increase demand on fire and police protection services and facilities, libraries, and school facilities. Therefore, development under the proposed project would be able to utilize the same existing fire and police protection services and facilities, libraries, and school facilities as the General Plan. Similar to the General Plan, construction of new facilities to meet capacity demands would require project-level CEQA review, which would identify any required mitigation for potential site-specific impacts.

In addition, as with the General Plan, development of new public service facilities or parks resulting from the population increase under the Specific Pan would be subject to existing State regulations, including the CBC and California State Public Park Preservation Act, compliance with CEQA and the guidelines and regulations in the General Plan to reduce potential environmental impacts. Furthermore, the City and other public service providers would require development impact fees to maintain service levels. As a result, the proposed project would not introduce new impacts or substantially increased impacts related to public services and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to public services, and no mitigation measures are necessary.

Conclusion

Less Than Significant (Equal to the certified EIR for the 2040 General Plan)

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14. Transportation

The following section is based on the results of the VMT Screening Analysis that was prepared for the proposed project. The full technical report is provided in Appendix C of this document. The 2018 EIR determined that impacts relating to would be less than significant with mitigation incorporated.

The VMT Screening Evaluation was prepared for the proposed project in October 2022 (Appendix C). Changes to CEQA Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (Technical Advisory). The City adopted analytical procedures, screening tools, and impact thresholds for VMT, which are documented in the Contra Costa County Transportation Analysis Guidelines (June 2020) (County Guidelines).

Overall, the proposed project will result in a net increase of 562 two-way trip ends per day with a reduction of 134 AM peak hour trips and a reduction of 73 PM peak hour trips. Thus, the proposed project is estimated to generate trips above the 110 net new daily vehicle trip-threshold. Consistent with guidance identified in the County Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop" or an existing stop along a "high-quality transit corridor") may be presumed to have a less than significant impact absent substantial evidence to the contrary. Based on the Screening Tool, the Plan Area is shown to be located within a TPA.

County Guidelines state that residential projects (home-based VMT) at 15% or below the baseline County-wide home-based average VMT per capita in areas with low VMT that incorporate similar VMT reducing features (i.e., density, mix of uses, transit accessibility) are presumed to have a less than significant VMT impact. Using the Screening Tool, the County base line value was found to be 13.52 VMT per resident/capita and the 15% below threshold of 11.49 VMT per resident/capita. The proposed project was determined to have 3.4 VMT per resident/capita and, therefore, is presumed to have a less than significant VMT impact.

Thus, the Project meets the Proximity to Transit and Low VMT Based Screening criteria and would therefore be presumed to result in a less than significant VMT impact; no additional VMT analysis is required.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to transportation, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact with Mitigation (Equal to the certified EIR for the 2040 General Plan)

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15. Tribal Cultural Resources

The 2018 EIR for the 2040 General Plan determined that Tribal Cultural Resources impacts resulting from development would be less than significant with no mitigation required (Section 19, *Tribal Cultural Resources*, of the General Plan EIR).

Similar to the General Plan, development facilitated by the Specific Plan would generate less than significant impacts related to TCRs as defined in PRC 21074. The General Plan complied with the required SB 18 tribal consultation which would apply to the Specific Plan, ensuring a less than significant impact relating to tribal consultation. Individual projects under the proposed Specific Plan would require project-level CEQA review, which would identify and require mitigation for any potential site-specific impacts associated with tribal cultural resources. Individual projects would also be required to comply with AB 52 tribal consultation.

Nevertheless, the City created a list of Native Americans culturally affiliated with the vicinity of the Plan Area. In May of 2022, the City sent letters to the Native American contacts in the area to request information on potential cultural resources in the Project Plan vicinity that may be impacted by the proposed development. The City requested a response within 30-days of receipt as specified by AB 52. As of the date of this document, no tribes have requested consultation.

As a result, the Specific Plan would not introduce new impacts or substantially increased impacts related to tribal cultural resources and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur to tribal cultural resources, and no new mitigation measures are necessary.

Conclusion

Less Than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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16. Utilities and Service Systems

The 2018 EIR for the 2040 General Plan determined that Utilities and Service Systems impacts resulting from development would be less than significant with no mitigation required (Section 20, *Utilities and Service Systems*, of the General Plan EIR).

The General Plan EIR determined that development facilitated by the General Plan would be sufficiently served by existing utility service providers. Water, wastewater, and stormwater drainage service is provided by the City of Burlingame. Electric service in the project area is provided by Pacific Gas and Electric (PG&E) and Peninsula Clean energy and PG&E also provides gas service to the Plan Area. Solid waste collection in the Plan Area is provided by Recology.

Development changes facilitated by the Specific Plan are expected to be well served by existing utility service providers. However, changing uses from office to residential will cause an increased demand on sewer systems. The General Plan anticipates that the population will increase by 20% (from 30,000 to 38,778 in 2040). There is adequate wastewater capacity as the maximum system capacity is 5.5 million gallons per day (MGD) and existing flows is 3.5 MGD. The General Plan build-out would increase demand to 4.4 MGD. Using a conservative capacity metric of 85% of the 5.5 MGD, the new increase in population could technically increase by 33% and still not have any significant impacts. This would result in a total population of 39,900, allowing for an additional 1,122 residents. Therefore, development under the proposed Specific Plan would be able to utilize the same existing utility infrastructure and providers as development under the General Plan. Similar to the General Plan, upgrades to existing utility infrastructure or construction of new utility infrastructure to meet capacity demands would require project-level CEQA review, which would identify any required mitigation for potential site-specific impacts. Additionally, similar to the General Plan, it is anticipated that construction of major new power lines or facilities would not be required under the proposed Specific Plan.

As a result, the proposed Specific Plan would not introduce new impacts or substantially increased impacts related to utilities and other service systems and would be consistent with the impact analysis provided in the 2018 EIR for the 2040 General Plan. Impacts would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur related to utilities and service systems, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact (Equal to the certified EIR for the 2040 General Plan)

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17. Wildfire

The 2018 Final EIR did not address wildfire.

Appendix G of the CEQA Guidelines states the wildfire of the project are considered significant if the project would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan;

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;

d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The Plan Area is located in a relatively flat portion of the City surrounded by developed, urban landscape. Implementation of the proposed project would fully develop the area with hardscape (i.e., buildings, paved walkways, compacted dirt for the proposed paddock and corral, driveways, and parking areas) and drought-tolerant landscaping. The proposed project would include installation of on-site and off-site drainage facilities and would not result in wildfire risks or risks related to downslope or downstream flooding or landslides subsequent to wildfire events. The Project would not include infrastructure that could exacerbate fire risks. Furthermore, proposed driveways, vehicle circulation areas, and parking areas will be designed to accommodate emergency vehicle access and circulation.

The proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan and would not impair abilities of emergency response services, including response to wildfire. Therefore, proposed project impacts related to wildfire risks would be less than significant.

Effects and Mitigation Measures

No new or substantially more severe effects would occur associated with wildfire hazards, and no mitigation measures are necessary.

Conclusion

Less than Significant Impact

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5 Conclusion

As discussed in detail in the preceding sections and summarized in Table 2, potential impacts associated with the proposed project are consistent with potential impacts characterized and mitigated for in the 2018 General Plan EIR. Substantive revisions to the 2018 approved General Plan EIR are not necessary because no new significant impacts or impacts of substantially greater severity than previously described would occur as a result of the proposed Specific Plan. Therefore, the following determinations have been found to be applicable:

- No further evaluation of environmental impacts is required for the proposed project;
- No Subsequent EIR is necessary per CEQA Guidelines Section 15162; and
- This Addendum is the appropriate level of environmental analysis and documentation for the proposed project in accordance with CEQA Guidelines Section 15164.

Pursuant to CEQA Guidelines Section 15164(c), this Addendum will be included in the public record for the approved 2040 General Plan. Documents related to this Addendum will be available at the City of Burlingame Community Development Department located at 501 Primrose Road, Burlingame, California 94010.

Table 2 Proposed Specific Plan Compared to Approved General Plan Update EIR

Issue	Proposed Project
Aesthetics	=
Air Quality	=
Biological Resources	=
Cultural Resources	=
Geology/Soils	=
Greenhouse Gas Emissions	=
Hazards and Hazardous Materials	=
Hydrology and Water Quality	=
Land Use/Planning	=
Noise	=
Population/Housing	=
Public Services	=
Transportation/Traffic	=
Tribal Cultural Resources	=
Utilities/Service Systems	=
Wildfire	LTS[1]

+ Impacts greater than those of the GPU

- Impacts less than those of the GPU

= Impacts similar to the GPU

LTS – Less Than Significant Impact

[1] Wildfire was not analyzed in the General Plan Update EIR. The new analysis indicates a less than significant impact.

6 References and Preparers

References

Burlingame, City of. 2018. Draft Environmental Impact Report, Burlingame 2040 General Plan.

_____ 2022. North Rollins Specific Plan.

California Department of Forestry and Fire Protection. 2022. Fire Hazard Severity Zone Viewer. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=4466cf1d2b9947bea1d4269997e86553; Accessed February 2023.

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This consistency checklist was prepared by Rincon Consultants, Inc. under contract to the City of Burlingame. Persons and firms involved in data gathering, analysis, project management, and quality control include:

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Appendix A

Air Quality and Greenhouse Gas Emissions Technical Report

North Rollins Specific Plan

Air Quality and Greenhouse Gas Emissions Technical Study

prepared for

City of Burlingame
Community Development Department
501 Primrose Road
Burlingame, California 94010

prepared by

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January 2023

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1 Project Description

1.1 Introduction

This study analyzes the potential air quality and greenhouse gas (GHG) impacts of the North Rollins Road Specific Plan (project or proposed project) located in the City of Burlingame, California. Rincon Consultants, Inc. (Rincon) prepared this study for the City of Burlingame (applicant) for use in support of environmental documentation being prepared for the City of Burlingame for the project pursuant to the California Environmental Quality Act (CEQA). The purpose of this study is to analyze the project's air quality and GHG impacts related to both temporary construction activity and long-term operation of the project. Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

Issue	General Plan EIR Finding	Specific Plan Finding	Does the project result in a new and substantial impact not analyzed in the General Plan EIR?
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Less than significant impact	Less than significant impact	No
Would the project 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?	Less than significant impact	Less than significant impact	No
Would the project expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact	Less than significant impact	No
Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant impact	Less than significant impact	No
Greenhouse Gas Emissions			
Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	Significant and unavoidable	Less than significant impact	No
Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Significant and unavoidable	Less than significant impact	No

1.2 Project Summary

Project Location

The North Rollins Road Specific Plan area is approximately 88.8 acres located in the northern portion of the City of Burlingame. Regional access to the site is available via the adjacent US Highway 101 (US 101) to the northeast and via State Route 82 (SR 82) to the southwest. Interstate 280 (I-280) is located approximately 1.3 miles southwest of the project area, and the Millbrae Transit Center is located approximately one-quarter mile to the northwest of the project area boundary (City of Burlingame 2022a). Figure 1 shows the project area's regional location and Figure 2 shows the project area and its surroundings.

Project Description

The North Rollins Specific Plan area is designated as "Live/Work" in the "Envision Burlingame" 2040 General Plan. The Specific Plan is consistent with the Live/Work designation and envisions converting the existing low-rise industrial area into a dynamic mixed-use, residential, commercial, and industrial neighborhood. The General Plan EIR analyzed the maximum allowable development for the North Rollins Specific Plan. Table 2 shows the new remaining intensity under the North Rollins Specific Plan, which includes 1,557 multi-family dwelling units, 591,217 square feet of industrial uses, 50,083 square feet of office uses, and 139,266 square feet of commercial uses.

Table 2 New Remaining Intensity under the North Rollins Specific Plan

Land Use Description	General Plan Maximum Allowed	Class 32 Exempt	Remaining Intensity	Recommended Adjustments	New Remaining Intensity
Multi-family (dwelling unit)	1,199	563	1,199	358	1,557
Industrial (square feet)	696,331	(114,449)	696,331	(105,114)	591,217
Office (square feet)	174,083	-	174,083	(124,000)	50,083
Commercial (square feet)	139,266	7,761	139,266	-	139,266

Figure 1 Regional Location

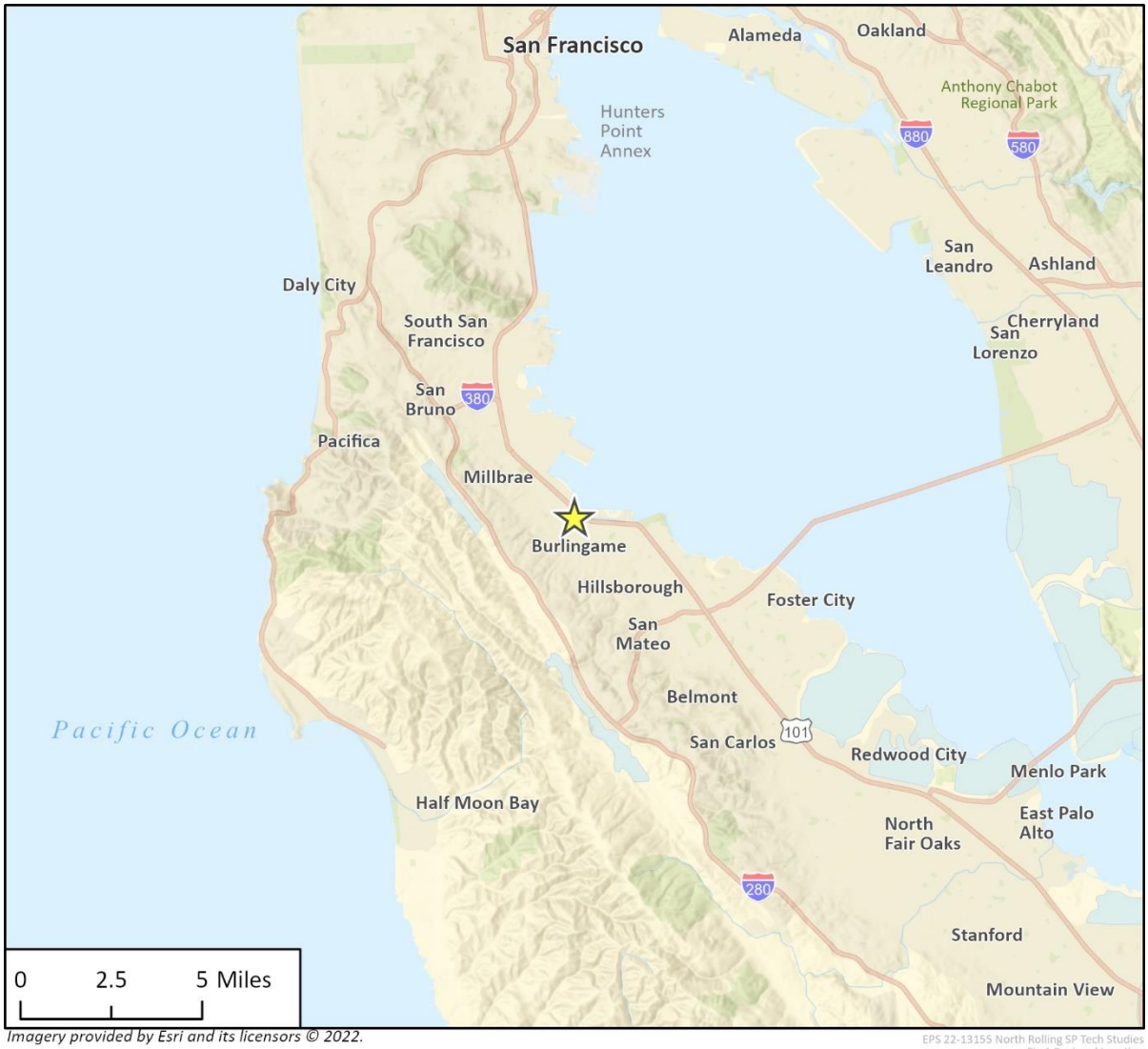

Figure 2 Project Site

2 Air Quality

2.1 Environmental and Regulatory Setting

2.1.1 Local Climate and Meteorology

The project site is in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). 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.

The City of Burlingame is located in the western portion of the SFBAAB and the proximity to the San Francisco Bay influence the climate in the city and surrounding region. As most of San Francisco's topography is below 200 feet, marine air is able to flow easily across the city, making its climate cool and windy. The annual high temperature is approximately 72°F, while the annual low temperature is approximately 45°F. Winds play a large role in controlling climate in the area, and annual average winds range between five and ten miles per hour in this region (BAAQMD 2017a).

2.1.2 Air Pollutants of Primary Concern

Pollutants may be emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere; these pollutants include carbon monoxide, nitrogen dioxide, particulate matter with a diameter of up to ten microns (PM_{10}) and up to 2.5 microns ($PM_{2.5}$), sulfur dioxide, and lead.

Additionally, pollutants may be created indirectly through chemical reactions in the atmosphere. Ozone is created by atmospheric chemical and photochemical reactions between reactive organic gases[1] (ROG) and nitrogen oxides (NO_X). The following subsections describe the characteristics, sources, and health and atmospheric effects of air pollutants of primary concern.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (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 changes in breathing patterns, reduction of breathing capacity,

[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 analysis.

increased susceptibility to infections, inflammation of lung tissue, and some immunological changes (BAAQMD 2017a). Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

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 or proximate to locations of vehicle idling, such as parking structures or congested high-capacity roadway intersections. 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 aggravation of some heart diseases (e.g., angina), reduced tolerance for exercise, impaired mental function, and impaired fetal development. At high levels of exposure, carbon monoxide reduces the amount of oxygen in the blood, leading to mortality (BAAQMD 2017a). Carbon monoxide tends to dissipate rapidly into the atmosphere; consequently, violations of the NAAQS and/or CAAQS 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 symptoms, particularly in sensitive groups ([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 included in a group of highly reactive gases known as "oxides of sulfur." The largest sources of sulfur dioxide emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of sulfur dioxide emissions include industrial processes such as extracting metal from ore and the burning of fuels with a high sulfur content by locomotives, large ships, and off-road equipment. Sulfur dioxide is linked to a number of adverse effects on the respiratory system, including aggravation of respiratory diseases, such as asthma and emphysema, and reduced lung function (BAAQMD 2017a).

Particulate Matter

Suspended atmospheric PM_{10} and $PM_{2.5}$ is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $PM_{2.5}$ are directly emitted into the atmosphere as by-products of fuel combustion and wind erosion of soil and unpaved roads. Particulate matter is also created in the atmosphere through chemical reactions. The characteristics,

sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles while $PM_{2.5}$ is 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 health threat to all groups, but particularly to the elderly, children, and those with respiratory problems (CARB 2020a). More than half of $PM_{2.5}$ that is inhaled into the lungs remains there. 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 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 2020b). Within the SFBAAB, DPM accounted for approximately 85 percent of the cancer risk from air toxics in the region with mobile sources being one of the top contributors (BAAQMD 2016, 2020)

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.

2.1.3 Air Quality Regulation

Federal Air Quality Regulations

The Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, to achieve the purposes of Section 109 of the CAA [42 USC 7409], the U.S. EPA developed Ambient Air Quality Standards which represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) have been designated for the following criteria pollutants of primary concern: ozone, carbon monoxide, nitrogen dioxide, lead, sulfur dioxide, $PM_{10,}$ and $PM_{2.5}$.

The U.S. EPA classifies specific geographic areas as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. State plans also must control emissions that drift across state lines and harm air quality in downwind states. Table 3 lists the current federal standards for regulated pollutants.

Table 3 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	CAAQS
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	–	–
	24-Hour	–	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	35 µg/m^3	–
Lead	30-Day Average	–	1.5 µg/m^3
	3-Month Average	0.15 µg/m^3	–

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter

Source: CARB 2016; U.S. EPA 2016

State Air Quality Regulations

CALIFORNIA CLEAN AIR ACT

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code (H&SC) §39000 et seq.). Under the CCAA, the State has developed the California Ambient Air Quality

Standards (CAAQS), which are generally more stringent than the NAAQS. Table 3 lists the current state standards for regulated pollutants. In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Like the federal CAA, the CCAA classifies specific geographic areas as either “attainment” or “nonattainment” areas for each pollutant, based on the comparison of measured data within the CAAQS.

California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. As discussed in Section 2.3, *Federal Air Quality Regulations*, the U.S. EPA classifies specific geographic areas as either “attainment” or “nonattainment” areas for NAAQS for each pollutant. If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as a nonattainment area for that pollutant. Under the federal and state Clean Air Acts, once a nonattainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. Areas that have been redesignated to attainment are called maintenance areas.

TOXIC AIR CONTAMINANTS

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: H&SC Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

STATE IMPLEMENTATION PLAN

The SIP is a collection of documents that set forth the state’s strategies for achieving the NAAQS and CAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. CARB is the lead agency for all purposes related to the SIP under state law. Local air districts are responsible for preparing and implementing air quality attainment plans for pollutants for which the district is in non-compliance; the plans are incorporated into the SIP. Additionally, other agencies such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to

the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

Regional and Local Regulations

Air Quality Management Plan

The BAAQMD is responsible for assuring that the federal and State ambient air quality standards are attained and maintained in the Bay Area. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities.

The SFBAAB is designated nonattainment for the federal standards for ozone and $PM_{2.5}$ and in nonattainment for the state standard for ozone, $PM_{2.5}$, and PM_{10}. The SFBAAB is designated unclassifiable or in attainment for all other federal and state standards.

The BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) as an update to the 2010 Clean Air Plan in April 2017. The 2017 Plan provides a regional strategy to protect public health and the climate. Consistent with the GHG reduction targets adopted by the state, the 2017 Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (BAAQMD 2017b). To fulfill state ozone planning requirements, the 2017 Plan includes all feasible measures to reduce emissions of ozone precursors—reactive organic gases (ROG) and nitrogen oxides (NO_X)—and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and TAC (BAAQMD 2017b).

BAAQMD Rules

The BAAQMD implements rules and regulations for emissions that may be generated by various uses and activities. The rules and regulations detail pollution-reduction measures that must be implemented during construction and operation of projects. Rules and regulations relevant to the project include the following:

Regulation 8, Rule 3 (Architectural Coatings): This rule limits the quantity of volatile organic compounds that can supplied, sold, applied, and manufactured within the BAAQMD region (2009).

CEQA Air Quality Guidelines: The BAAQMD recommends the following fugitive dust control best management practices during construction for all projects (BAAQMD 2017a):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times daily.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 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.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.

- Idling times shall 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 shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall 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 County regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

City of Burlingame General Plan

The City of Burlingame General Plan was adopted in 2019. Chapter 9, Healthy People and Healthy Places, of the Burlingame General Plan contains goals and policies applicable to the proposed project (City of Burlingame 2019).

Goal HP-3 Minimize Exposure of residents and employees of local businesses to harmful air pollutants.

Policy HP-3.1 **Regional Air Quality Standards.** Support regional policies and efforts to improve air quality, and participate in regional planning efforts with the Bay Area Air Quality Management District to meet or exceed air quality standards.

Policy HP-3.2 **Local Air Quality Standards.** Work with local businesses, industries, and developers to reduce the impact of stationary and mobile sources of pollution. Ensure that new development does not create cumulative net increases in air pollution, and require Transportation Demand Management Techniques (TDM) when air quality impacts are unavoidable.

Policy HP-3.3 **Indoor Air Quality Standards.** Require that developers mitigate impacts on indoor air quality for new residential and commercial developments, particularly along higher density corridors, near industrial uses, and along the freeway and rail line, such as in North Burlingame, along Rollins Road, and in Downtown. Potential mitigation strategies include installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers.

Policy HP-3.4 **Air Pollution Reduction.** Support regional efforts to improve air quality, reduce auto use, expand infrastructure for alternative transportation, and reduce traffic congestion. Focus efforts to reduce truck idling to two minutes or fewer in industrial and warehouse districts along Rollins Road and the Inner Bayshore.

Policy HP-3.5 **Wood stove and Fireplace Replacement.** Encourage residents to replace wood-burning fireplaces and stoves with cleaner electric heat pumps, natural gas, or propane stoves. Educate the public about financial assistance options through the Bay Area Air Quality Management District's fireplace and wood stove replacement incentive program.

Policy HP-3.6 **Caltrain Electrification.** Encourage the electrification of Caltrain to eliminate emissions from the rail line.

Policy HP-3.7 **Proximity to Sensitive Locations.** Avoid locating stationary and mobile sources of air pollution near sensitive uses such as residences, schools, childcare facilities, healthcare facilities, and senior living facilities. Where adjacencies exist, include site planning and building features that minimize potential conflicts and impacts.

Policy HP-3.8 **Proximity to Emission Sources.** Avoid locating residential developments and other sensitive uses near significant pollution sources such as freeways and large stationary source emitters. Require Bay Area Air Quality Management District recommended procedures for air modeling and health risk assessment for new sensitive land uses located near sources of toxic air contaminants.

Policy HP-3.9 **Building Site Design and Operations.** Place sensitive uses within development projects (e.g. residences, daycares, medical clinics) as far away from emission sources (including loading docks, busy roads, stationary sources) as possible. Design open space, commercial buildings, or parking garages between sensitive land uses and air pollution sources as a buffer. Locate operable windows, balconies, and building air intakes far away from emission sources.

Policy HP-3.10 **Truck Routes.** Ensure projects that generate truck traffic and existing truck routes avoid sensitive land uses such as residences, schools, day care centers, senior facilities, and residences.

Policy PH-3.11 **Dust Abatement.** Require dust abatement actions for all new construction and redevelopment projects.

Policy HP-3.12 **Construction Best Management Practices.** Require construction projects to implement the Bay Area Air Quality Management District's Best Practices for Construction to reduce pollution from dust and exhaust as feasible; require construction projects to transition to electrically-powered construction equipment as it becomes available; and seek construction contractors who use alternative fuels in their equipment fleet.

2.1.4 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 SFBAAB monitoring station closest to the project site is the Redwood City Station at 897 Barron Avenue, which is located approximately 12 miles southeast of the project area. This monitoring station measures ozone, NO_x, and $PM_{2.5}$. For PM_{10} measurements, the San Francisco-Arkansas station at 10 Arkansas Street was used. This monitoring station is located approximately 12 miles north of the project area.

Table 4 indicates the number of days that each of the federal and State standards has been exceeded at this station in each year from 2019 to 2021. One-hour ozone exceeded State thresholds once in 2020, and eight-hour ozone exceeded both State and federal thresholds twice in 2019 and

once in 2020. $PM_{2.5}$ exceeded federal thresholds nine times in 2020. PM_{10} exceeded State thresholds twice in 2020. No other thresholds were exceeded in the years 2019 through 2021.

Table 4 Ambient Air Quality – Monitoring Station Measurements (2019-2021)

Pollutant	2019	2020	2021
Redwood City Station			
Ozone (ppm), Worst 1-Hour	0.083	0.098	0.085
Number of days above CAAQS (>0.09 ppm)	0	1	0
Number of days above NAAQS (>0.12 ppm)	0	0	0
Ozone (ppm), Worst 8-Hour Average	0.077	0.078	0.064
Number of days above CAAQS (>0.070 ppm)	2	1	0
Number of days above NAAQS (>0.070 ppm)	2	1	0
Nitrogen Dioxide (ppm), Worst 1-Hour	54.9	45.9	40.5
Number of days above CAAQS (>0.180 ppm)	0	0	0
Number of days above NAAQS (>0.100 ppm)	0	0	0
Particulate Matter <2.5 microns ($\mu g/m^3$), Worst 24 Hours	29.5	124.1	30.1
Number of days above NAAQS (>35 $\mu g/m^3$)	0	9	0
San Francisco-Arkansas Street Station			
Particulate Matter <10 microns ($\mu g/m^3$), Worst 24 Hours	42.1	105.0	33.0
Number of days above CAAQS (>50 $\mu g/m^3$)	0	2	0
Number of days above NAAQS (>150 $\mu g/m^3$)	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

Source: CARB 2022a

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect people most susceptible to respiratory distress, such as children under 14; persons over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. Therefore, most of the sensitive receptor locations are schools, hospitals, senior living centers, and residential areas.

The project area currently includes mainly commercial, industrial, and office uses, with no residential uses and one sensitive receptor, the Pied Piper Players (drama school). The nearest sensitive receptors outside of the Specific Plan area are single-family homes located adjacent to California Drive, approximately 275 feet southwest of the project area.

2.2 Impact Analysis

a. Thresholds of Significance

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires 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.

BAAQMD Significance Thresholds

The plan-level thresholds specified in the May 2017 BAAQMD *CEQA Air Quality Guidelines* were used to determine whether the proposed project impacts exceed the thresholds identified in *CEQA Guidelines* Appendix G.

Consistency with the Air Quality Plan

Under BAAQMD's methodology, a determination of consistency with *CEQA Guidelines* thresholds should demonstrate that a project:

1. Supports the primary goals of the 2017 Clean Air Plan;
2. Includes applicable control measures from the 2017 Clean Air Plan; and
3. Does not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

Construction Emissions Thresholds

The BAAQMD's May 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions. However, they do include project-level screening and emissions thresholds for temporary construction-related emissions of air pollutants. 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 and are discussed in detail below (BAAQMD 2017a). Construction emissions associated with plan implementation are discussed qualitatively to evaluate potential air quality impacts.

The BAAQMD developed screening criteria in the 2017 *CEQA Air Quality Guidelines* to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts. The screening criteria for residential land uses are shown in Table 5.

Table 5 BAAQMD Criteria Air Pollutant Screening Levels

Land Use Type	Operational Criteria Pollutant Screening Size (du)	Construction Criteria Pollutant Screening Size (du)
Single-family	325 (NO_X)	114 (ROG)
Apartment, low-rise	451 (ROG)	240 (ROG)
Apartment, mid-rise	494 (ROG)	240 (ROG)
Apartment, high-rise	510 (ROG)	249 (ROG)
Condo/townhouse, general	451 (ROG)	240 (ROG)
Condo/townhouse, high-rise	511 (ROG)	252 (ROG)
Mobile home park	450 (ROG)	114 (ROG)
Retirement community	487 (ROG)	114 (ROG)
Congregate care facility	657 (ROG)	240 (ROG)

du = dwelling unit; NO_X = oxides of nitrogen; ROG = reactive organic gases

Source: BAAQMD 2017a

If a project meets the screening criteria, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2017a).

In addition to the screening levels above, several additional factors are outlined in the 2017 *CEQA Air Quality Guidelines* that construction activities must satisfy for a project to meet the construction screening criteria:

- All basic construction measures from the 2017 *CEQA Guidelines* must be included in project design and implemented during construction
- 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 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 material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity

For projects that do not meet the screening criteria above, the BAAQMD construction significance thresholds for criteria air pollutants, shown in Table 6, are used to evaluate a project's potential air quality impacts.

Table 6 BAAQMD Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds Average Daily Emissions (lbs/day)	Operational Threshold Average Daily Emissions (lbs/day)	Operational Threshold Maximum Annual 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
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	Not Applicable

lbs = pounds; NO_X = oxides of nitrogen; ROG = reactive organic gases; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns

Source: BAAQMD 2017a

For all projects in the SFBAAB, the BAAQMD 2017 *CEQA Air Quality Guidelines* recommends implementation of the Basic Construction Mitigation Measures listed in Table 8-2 of the Guidelines (BAAQMD 2017a). For projects that exceed the thresholds in Table 6, the BAAQMD 2017 *CEQA Air Quality Guidelines* recommends implementation of the Additional Construction Mitigation Measures listed in Table 8-3 of the Guidelines (BAAQMD 2017a).

Operation Emissions Thresholds

The BAAQMD's 2017 *CEQA Air Quality Guidelines* contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures, and
- Vehicle miles traveled (VMT) or vehicle trips increase is less than or equal to the plan's projected population increase.

If a plan can demonstrate consistency with both criteria, then impacts would be less than significant. The current air quality plan is the 2017 Clean Air Plan.

For project-level thresholds, the screening criteria for operational emissions are shown in Table 5. For projects that do not meet the screening criteria, the BAAQMD operational significance thresholds for criteria air pollutants, shown in Table 6, are used to evaluate a project's potential air quality impacts.

Carbon Monoxide Hotspots

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

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

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

Toxic Air Contaminants

For health risks associated with TAC and $PM_{2.5}$ emissions, the BAAQMD May 2017 CEQA Air Quality Guidelines state a project would result in a significant impact if the any of the following thresholds are exceeded (BAAQMD 2017a):

- Non-compliance with Qualified Community Risk Reduction Plan; Increased cancer risk of > 10.0 in a million;
- Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or Ambient $PM_{2.5}$ increase of > 0.3 µg/m^3 annual average

Lead

Projects would be required to comply with BAAQMD Regulation 11, Rule 1 (Lead), which is intended to control the emission of lead into the atmosphere.

Asbestos

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

Odors

The BAAQMD provides minimum distances for siting of new odor sources shown in Table 7. A significant impact would occur if the project would result in other emissions (such as odors) affecting substantial numbers of people or would site a new odor source as shown in Table 7 within the specified distances of existing receptors.

Table 7 BAAQMD Odor Source Thresholds

Odor Source	Minimum Distance for Less than Significant Odor Impacts (in miles)
Wastewater Treatment Plant	2
Wastewater Pumping Facilities	1
Sanitary Landfill	2
Transfer Station	1
Composting Facility	1
Petroleum Refinery	2
Asphalt Batch Plant	2
Chemical Manufacturing	2
Fiberglass Manufacturing	1

Odor Source	Minimum Distance for Less than Significant Odor Impacts (in miles)
Painting/Coating Operations	1
Rendering Plant	2
Source: BAAQMD 2017a	

b. Methodology

Construction Emissions

Construction-related emissions are temporary but may still result in adverse air quality impacts. Construction of development associated with the proposed project would generate temporary emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, etc.); ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, there is not sufficient detail to allow project-level analysis and thus it would be speculative to analyze project-level impacts. Rather, consistent with the programmatic nature of the project, construction impacts for the proposed project are discussed qualitatively and emissions are not compared to the project-level thresholds.

Operation Emissions

Based on plan-level guidance from the BAAQMD 2017 *CEQA Air Quality Guidelines,* long-term operational emissions associated with implementation of the proposed project are discussed qualitatively by comparing the proposed project to the 2017 Clean Air Plan goals, policies, and control measures. In addition, comparing the rate of increase of plan VMT and population is recommended by BAAQMD for determining significance of criteria pollutants. If the proposed project does not meet either criterion then impacts would be potentially significant.

c. Findings of the Burlingame 2040 General Plan EIR

The Burlingame 2040 General Plan EIR found that the 2040 General Plan would be consistent with the 2017 Clean Air Plan and would not result in an increase in VMT that is more than the projected population increase. Thus, the 2040 General Plan would not result in significant increases in criteria air pollutants or precursor pollutant emissions and impacts would be less than significant.

The Burlingame 2040 General Plan EIR found that although implementation of the 2040 General Plan would result in new sensitive receptors that could be exposed to localized concentrations of TACs of $PM_{2.5}$, and could also result in new sources of TACs that could impact existing sensitive receptors, policies in the 2040 General Plan would ensure potentially adverse community risks and hazards are adequately evaluated and addressed. Therefore, impacts related to TACs and $PM_{2.5}$ would be less than significant.

The Burlingame 2040 General Plan EIR stated that the 2040 General Plan does not directly authorize any new potential odor sources within the City. However, implementation of the 2040 General Plan would result in new sensitive receptors that could be exposed to odors from existing or new industrial and commercial sources. The Burlingame 2040 General Plan EIR found that policies in the 2040 General Plan would protect residents and employees from odors by ensuring developers mitigate indoor air quality and evaluating the location of new emissions sources and new receptors. Therefore, impacts related to odors would be less than significant (City of Burlingame 2018).

2.2.1 Project Impacts

Impact 1 Increases in Criteria Air Pollutants and Precursor Emissions

Consistency with 2017 Clean Air Plan

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 periodically. 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 2017b).

The 2017 Plan focuses on two paramount goals (BAAQMD 2017b):

- 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 GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

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

- Supports the primary goals of the 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. The North Rollins Specific Plan would decrease the amount of office and industrial uses and encourage denser and an increased number of multi-family housing units compared to the General Plan EIR, in a location near the Millbrae Transit Center (located approximately 1,100 feet north of the project area). The Millbrae Transit Center provides access to Caltrain, BART, San Mateo County Transit (SamTrans), and local community shuttle services. By allowing for the easier use of alternative modes of transportation through proximity to services, jobs, bus stops, BART stations, and bicycle routes, development facilitated by the project would reduce the use of personal vehicles and subsequent mobile emissions than if development were placed further from transit.

In addition, development facilitated by the project would be required to comply with the latest Title 24 regulations, including requirements for residential indoor air quality. The analysis is based on compliance with 2022 Title 24 requirements although individual projects developed under the plan would be required to comply with the most current version of Title 24 at the time of project construction. These requirements currently mandate Minimum Efficiency Reporting Value 13 (or

equivalent) filters for heating/cooling systems and ventilation systems in residences (Section 150.0[m]) or implementation of future standards that would be anticipated to be equal to or more stringent than current standards. Therefore, the project would improve air quality compared to development farther from transit and services through reducing VMT and would protect public health through stringent requirements for MERV-13 filters or equivalent indoor air quality measures, which would be consistent with the primary goals of the 2017 Clean Air Plan.

Table 8 Project Consistency with Applicable 2017 Plan Control Measures

Clean Air Plan Control Measures	Consistency
Transportation	
TR9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.	**Consistent**: The North Rollins Specific Plan contains requirements and guidelines for bicycle and pedestrian improvements. Section 3.5.1 of the North Rollins Specific Plan incorporates a complete streets approach through facilitating pedestrian circulation within and adjacent to the project area to minimize automobile trip generation, and encouraging improvements to the circulation and mobility system through providing designated Class II bicycle routes on both sides of Rollins Road and Class III bicycle routes in other Specific Plan areas. Future development would be required to comply with Section 5.7e of the North Rollins Specific Plan, which outlines bicycle parking requirements for residential land uses at a minimum of 0.05 spaces per unit for short-term visitor bicycle parking and 0.5 spaces per unit for long-term resident bicycle parking. Exhibit 3.3 of the North Rollins Specific Plan shows proposed sidewalks, bicycle routes, and crossings under the project which serve to increase and enhance bicycle and pedestrian facilities in the project area.
Energy	
EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy-efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.	**Consistent**: Future multi-family and commercial development facilitated under the project would be required to comply with the city's Reach Code, or Ordinance 1980, which exceeds the energy efficiency standards of the California Energy Code. The Reach Code requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, for future multi-family development, pursuant to Ordinance 1980, 10 percent of dwelling units with parking spaces would be required to be provided with at least one Level 2 EV Ready space, and the remaining dwelling units with parking space(s) would be required to be provided with at least one Level 1 EV Ready space and have conduit installed to accommodate potential future Level 2 charging demands (City of Burlingame 2020). Future development would also be required to comply with Chapter 4.4 of the North Rollins Specific Plan, which lists sustainability guidelines for building design, energy conservation, and water (City of Burlingame 2022a).

Clean Air Plan Control Measures	Consistency
Buildings	
BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG's BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.	**Consistent**: Future development facilitated by the North Rollins Specific Plan would be required to comply with the energy and sustainability standards of Title 24 (including the California Energy Code and CALGreen) and the City's associated amendments that are in effect at that time. For example, the current CALGreen standards require a minimum 65 percent diversion of construction/demolition waste and the BMC Section 8.17.030(a) requires at least 60 percent of diversion. The city's Reach Code requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, Section 4.4.3 of the North Rollins Specific Plan includes guidelines for sustainable lighting such as using high-efficacy solid-state light emitting diode (LED) lighting for outdoor applications and using appropriate color spectral distribution to reduce glare.
Water	
WR2: Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.	**Consistent**: Future development requiring new or expanded water service would be required to comply with San Francisco Public Utilities Commission's (SFPUC) water efficiency regulations, which include water use restrictions and water efficient irrigation rules (SFPUC 2019). Additionally, Section 4.4.5 of the North Rollins Specific Plan requires future development to comply with BMC Chapter 18.17 (Water Conservation in Landscape), and to implement greywater recycling programs where feasible.

Source: BAAQMD 2017b

As shown in Table 8, the project would be consistent with the applicable measures as development facilitated by it would be required to comply with the latest Title 24 regulations and would increase density in urban areas, allowing for greater use of alternative modes of transportation. Development facilitated by the project does not contain elements that would disrupt or hinder implementation of a 2017 Clean Air Plan control measures. Therefore, the project would conform to this determination of consistency for the 2017 Clean Air Plan and would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Criteria Air Pollutant Emissions - Construction

Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROGs and NO_X emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. According to the 2017 BAAQMD *CEQA Air Quality Guidelines,* PM_{10} is the greatest pollutant of concern during construction (BAAQMD 2017a).

As discussed above, BAAQMD's 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutant emissions that would apply to the project. However, the guidelines include project-level thresholds for construction emissions. If an individual project is subject to CEQA and has construction emissions that fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. The BAAQMD has identified feasible fugitive dust control measures for construction activities, and recommends implementation of eight Basic Construction Mitigation Measures to reduce fugitive dust levels. Future development facilitated by the North Rollins Specific Plan would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan. Policy HP-3.10 ensures projects that generate truck traffic and existing truck routes avoid sensitive land uses to reduce sensitive receptor exposure to dust and exhaust emissions from trucks; Policy HP-3.11 requires dust abatement actions for all new construction to reduce fugitive dust and PM_{10} emissions from construction activities; and Policy HP-3.12 requires projects to implement BAAQMD's Basic Construction Mitigation Measures to reduce pollution from dust and exhaust. Therefore, similar to the finding in the 2040 General Plan EIR, construction emission impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

FUGITIVE DUST EMISSIONS

Site preparation and grading during construction activities facilitated by development under the proposed project may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The BAAQMD has not established a quantitative threshold for fugitive dust emissions but rather states that projects that incorporate best management practices (BMPs) for fugitive dust control during construction would have a less than significant impact related to fugitive dust emissions. As described above, future development facilitated by the project would be required to comply with Goal HP-3 and Policies HP-3.10 through 3.12 of the Healthy People, Healthy Places Element of the 2040 General Plan, which requires implementation of dust abatement actions and BAAQMD's Basic Construction Mitigation Measures. Therefore, similar to the finding in the Burlingame 2040 General Plan EIR, fugitive dust emission impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Criteria Air Pollutant Emissions – Operation

The proposed North Rollins Specific Plan would accommodate new residential, commercial, and industrial uses that will operate through the Specific Plan horizon year of 2040. Long-term criteria pollutant emissions would result from the operation of potential residential, retail, and light industrial uses supported by the North Rollins Specific Plan. Operational air quality emissions are evaluated in terms of area source emissions, energy demand emissions, and mobile emissions. Area source emissions are the combination of many small emission sources that include use of outdoor landscape maintenance equipment, use of consumer products such as cleaning products, and periodic repainting of a project. Energy demand emissions result from use of electricity and natural gas. Mobile emissions result from automobile and other vehicle sources associated with daily trips to and from the project vicinity.

The North Rollins Specific Plan would provide 358 more multi-family residential units than allowed under the 2040 General Plan, for a total of 1,557 multi-family residential units. As shown in Table 7-8 of the Burlingame 2040 General Plan EIR, the 2040 General Plan would likely lead to increases in emissions in the SFBAAB, and the North Rollins Specific Plan would most likely result in similar

emissions since it would increase the number of residential units but decrease the amount of office and industrial uses. Nonetheless, development of future projects within the planning area would be subject to the City's standard CEQA review process and would be required to assess project-specific emissions in relation to the BAAQMD significance thresholds. Additionally, future development would be required to comply with Policy HP-2.7 of the Healthy Places Element of the 2040 General Plan, which encourages homeowners to install solar power systems; Policy HP-3.1, which ensures compliance with BAAQMD regulations and air quality standards; Policy HP-3.3, which require future developers mitigate impacts on indoor air quality for new residential development; and Policy HP-3.5, which encourages residents to replace wood-burning fireplaces and stoves with cleaner electric heat pumps, natural gas, or propane stoves. Future development would also be required to comply with the 2040 General Plan's Community Character, Mobility, and Infrastructure Elements, which contain land use, transportation, and infrastructure policies that would provide air quality benefits from sustainable land use planning and design consideration, complete streets and other mobility considerations that would reduce vehicle trips, and infrastructure planning to support alternative means of transportation. Therefore, similar to the finding in the Burlingame 2040 General Plan EIR, operational emissions impacts would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Project VMT and Population Growth

According to the BAAQMD 2017 *CEQA Air Quality Guidelines,* the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT versus population growth. The project would add 358 multi-family dwelling units to the area. Per the project's VMT screening evaluation, the project only has a 3.4 VMT per resident/capita compared to the County's baseline value of 13.52 VMT per resident/capita (Urban Crossroads 2022). This much lower number demonstrates the VMT efficiency of the North Rollins Specific Plan area that would place future residents in a dense, urban environment near alternative modes of transportation. Therefore, the project's VMT would not conflict with the BAAQMD's 2017 *CEQA Air Quality Guidelines* operational plan-level significance thresholds for criteria air pollutants and would be consistent with the 2017 Clean Air Plan. Accordingly, impacts would be less than significant, and the project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Impact 2 Community Risks and Hazards

Carbon Monoxide Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. The entire Basin is in conformance with state and federal CO standards, as indicated by the recent air quality monitoring. There are no current exceedances of CO standards within the air district and the Bay Area has not exceeded CO standards since before 1994.[2] For 2019, the Bay Area's reported maximum 1-hour and average daily concentrations of CO were 5.6 ppm and 1.7 ppm respectively (BAAQMD 2019).[3] These are well below the respective 1-hour and 8-hour standards of 20 ppm and 9 ppm. Given the ambient concentrations, which includes mobile as well as stationary sources, a project in the Bay Area would need to emit concentrations three times the hourly maximum ambient emissions for all sources before project emissions would exceed the 1-hour standard. Additionally, the project would need to emit seven times the daily average for ambient

[2] BAAQMD only has records for annual air quality summaries dating back to 1994.

[3] Data for 2019 was used as the data for 2020 and 2021 are not currently available.

concentrations to exceed the 8-hour standards. Typical development projects, even plan level growth, would not emit the levels of CO necessary to result in a localized hot spot. Therefore, impacts to CO hotspots would be less than significant, consistent with the findings in the Burlingame 2040 General Plan EIR. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Toxic Air Contaminants

In the Bay Area, there are several urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. According to BAAQMD *CEQA Guidelines* (Figure 5-1), the city 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). Operation of development facilitated by the project would not involve these uses; therefore, it is not considered a source of TACs. Furthermore, residences do not typically include new stationary sources onsite, such as emergency diesel generators. However, if residences did include a new stationary source onsite, it would be subject to BAAQMD Regulation 2, Rule 2 (New Source Review) and require permitting. This process would ensure that the stationary source does not exceed applicable BAAQMD health risk thresholds.

As discussed in the 2040 General Plan EIR, the 2040 General Plan would not result in a significant community risk and hazard impact if the land use diagram identifies special overlay zones around existing and planned sources of TACs and $PM_{2.5}$, including special overlay zones of at least 500 feet on each side of all freeways and high-volume roadways. Moreover, the CARB Air Quality and Land Use Handbook recommends avoiding the siting of new sensitive land uses within:

- 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- 300 feet of dry cleaning operations;
- 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- 1,000 feet of a major rail service or maintenance yard.

Although the 2040 General Plan Land Use Diagram and the North Rollins Specific Plan Land Use Diagram do not graphically depict overlay zones around specific, existing sources of TACs, future development facilitated by the North Rollins Specific Plan would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan which clearly state guidelines for projects and areas of the City where risks would be minimized, and ensure reduction of potential TAC emissions and associated adverse health risk impacts to a less than significant level. Policy HP-3.2 requires Transportation Demand Management (TDM) techniques when air quality impacts are unavoidable; Policy HP-3.3 requires future developers mitigate impacts on indoor air quality for new residential development by installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers; Policy HP-3.7 prevents locating stationary and mobile sources of air pollution near sensitive receptors; Policy HP-3.8 prevents locating residential developments near significant pollution sources and requires BAAQMD recommended procedures for air modeling and health risk assessment for new sensitive land uses located near sources of TACs; and Policy HP-3.9 ensures placing sensitive uses as far away from emission sources as possible. Therefore, operational impacts from TAC emissions would be less than significant, consistent with the findings in the Burlingame 2040 General Plan EIR. The project

would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Asbestos

BAAQMD Regulation 11, Rule 2 is intended to limit asbestos emissions from demolition or renovation of structures and the associated disturbance of asbestos-containing waste material generated or handled during these activities (BAAQMD 2017a). The rule addresses the national emissions standards for asbestos along with some additional requirements. The rule requires the Lead Agency and its contractors to notify BAAQMD of any regulated renovation or demolition activity. This notification includes a description of structures and methods utilized to determine whether asbestos-containing materials are potentially present. All asbestos-containing material found on the site must be removed prior to demolition or renovation activity in accordance with BAAQMD Regulation 11, Rule 2, including specific requirements for surveying, notification, removal, and disposal of material containing asbestos. Therefore, individual projects that comply with Regulation 11, Rule 2 would ensure that asbestos-containing materials would be disposed of appropriately and safely. By complying with BAAQMD Regulation 11, Rule 2, thereby minimizing the release of airborne asbestos emissions, demolition activity would not result in a significant impact to air quality. Per the BAAQMD Guidelines, because BAAQMD Regulation 11, Rule 2 is in place, no further analysis about the demolition of asbestos-containing materials is needed in a CEQA document (BAAQMD 2017).

Impact 3 Odors

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust both during normal use and when idling. However, these odors would be temporary and transitory and would cease upon completion. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people.

Table 6 provides BAAQMD odor screening distances for land uses with the potential to generate substantial odor complaints. Those uses include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants. As development facilitated by the project compared to the 2040 General Plan would be increased residential and reduction in industrial and office uses, none of the identified uses would occur. Additionally, future development would be required to comply with Goal HP-3 and policies within the Healthy People, Healthy Places Element of the 2040 General Plan that outline guidelines to protect residents and employees from harmful pollutants, including odors. Policy HP-3.2 requires local businesses, industries, and developers to reduce the impact of stationary and mobile sources of odors; Policy HP-3.3 requires future developers mitigate impacts on indoor air quality for new residential development by installing air filters (MERV 13 or higher), building sound walls, and planting vegetation and trees as pollution buffers; Policy HP-3.7 ensures stationary and mobile sources of air pollutants such as odors are not located near sensitive receptors; and Policy HP-3.9 outlines requirements for building site design and operations to place sensitive uses within development projects away from sources of emission, including odors. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people. This impact would be less than significant and consistent with the findings in the 2040 General Plan EIR.

3 Greenhouse Gas Emissions

3.1 Environmental and Regulatory Setting

3.1.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years.

The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric CO_2 concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted (IPCC 2021). It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane, and nitrous oxide in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (U.S. EPA 2021a). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature.

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (U.S. EPA 2021a).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon

dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (IPCC 2021).[4]

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2022). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

3.1.2 Greenhouse Gas Emissions Inventory

Global Emissions Inventory

In 2015, worldwide anthropogenic total 47,000 million MT of CO_2e, which is a 43 percent increase from 1990 GHG levels (U.S. EPA 2021b). Specifically, 34,522 million metric tons (MMT) of CO_2e of CO_2, 8,241 MMT of CO_2e of CH_4, 2,997 MMT of CO_2e of N_2O, and 1,001 MMT of CO_2e of fluorinated gases were emitted in 2015. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed for three percent and two percent was due to international transportation sources. These sources account for approximately 98 percent because there was a net sink[5] of two percent from land-use change and forestry. (U.S. EPA 2021b).

United States Emissions Inventory

Total U.S. GHG emissions were 6,558 MMT of CO_2e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease carbon intensity of energy fuel choices. In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (U.S. EPA 2021c).

California Emissions Inventory

Based on the CARB California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019, which is 7.2 MMT of CO_2e lower than 2018 levels. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the state's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021). The magnitude of California's total GHG emissions is due in part to its large size and large population

[4] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWPs from the Fourth Assessment Report.

[5] Net sink refers to the taking in of more carbon than can be emitted.

compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e (CARB 2022). The annual 2030 statewide target emissions level is 260 MMT of CO_2e (CARB 2017).

Local Emissions Inventory

In 2015, the City of Burlingame emitted approximately 242,489 MT CO_2e. Transportation was the largest source of emissions (53 percent), followed by commercial/industrial energy (28 percent). Residential energy contributed 16 percent, and the remaining 3 percent was from solid waste. GHG emission levels fell by approximately 12,672 MT CO_2e, or approximately five percent, from 2005 to 2015. Most of the GHG emission reductions are due to increased electricity supplied from renewable sources (e.g., solar and wind power), as required under the State's RPS Program (City of Burlingame 2019).

3.1.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Each of the past three decades has been warmer than all the previous decades in the instrumental record, 2013 through 2021 all rank among the ten-warmest years on record. It also marked the 45th consecutive year (since 1977) with global temperatures rising above the 20th century average (NOAA 2022). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased.

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state and regionally specific climate change case studies (State of California 2018). However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality and Wildfires

Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C (36.32°F to 37.76°F) in the next 50 years and by 3.1 to 4.9°C (37.58°F to 40.82°F) in the next century (State of California 2018). Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and

extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, which would effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them (California Natural Resources Agency 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts (State of California 2018). The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack (State of California 2018). Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding (State of California 2018). Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.3 millimeters per year, double the twentieth century trend of 1.6 millimeters per year (World Meteorological Organization 2013; National Aeronautics and Space Administration 2020). Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880 (National Aeronautics and Space Administration 2020). Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise ranging between 0.25 to 0 1.01 meters by 2100 with the sea level ranges dependent on a low, intermediate, or high GHG emissions scenario (IPCC 2021). A rise in sea levels could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California’s water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has an over $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems

Climate change and the potential resultant changes in weather patterns could have ecological effects on the global and local scales. Soil moisture is likely to decline in many regions as a result of higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018).

3.1.4 Regulatory Setting

The following regulations and case law address both climate change and GHG emissions.

Federal Regulations

Federal GHG Emissions Regulation

The U.S. Supreme Court determined in Massachusetts et al. v. Environmental Protection Agency et al. ([2007] 549 U.S. 05-1120) that the USEPA has the authority to regulate motor vehicle GHG emissions under the federal Clean Air Act. The USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the USEPA issued a Final Rule that established the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In Utility Air Regulatory Group v. Environmental Protection Agency (134 Supreme Court 2427 [2014]), the U.S. Supreme Court held the USEPA may not treat GHGs as an air pollutant for purposes of determining whether a source can be considered a major source required to obtain a Prevention of Significant Deterioration or Title V permit. The Court also held that Prevention of Significant Deterioration permits otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

In the most recent West Virginia v. Environmental Protection Agency (20-1530 [2022]), the U.S. Supreme Court held that the USEPA may not regulate emissions from coal- and gas-fired power

plants using generation shifting[6] that was implemented as part of the 2015 Clean Power Plan. The Court held that the USEPA is not permitted, under the Clean Air Act, to implement regulations for power plants that were allowed under the Clean Power Plan. However, the Court upheld EPA's authority to continue regulating greenhouse gas emissions from the power sector (Supreme Court 2021).

Safer Affordable Fuel-Efficient Vehicles Rule

In April 2020, EPA and NHTSA issued the Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, which required automakers to improve fuel efficiency 1.5 percent annually from model years 2021 through 2026. The SAFE rule also upended State emission programs, and withdrew the waiver for California's Advanced Clean Cars Program, Zero Emission Vehicle Program (ZEV), and Low-Emission Vehicle Program (LEV). In response, California and other states sued in federal court to challenge the final action on preemption of state vehicle standards. In April 2021, the Biden administration, USEPA, and Department of Transportation began the process of dropping limitations on California's waiver. In December 2021, NHTSA issued a repealing of the SAFE Vehicle Rule Part One. In March 2022, USEPA did the same, thereby reinstating California's waiver and the ability of other states to adopt the California standards (Center for Climate and Energy Solutions [C2ES] 2022).

State Regulations

CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. There are numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below. For more information on the Senate and Assembly Bills, executive orders, building codes, and reports discussed below, and to view reports and research referenced below, please refer to the following websites: https://www.energy.ca.gov/data-reports/reports/californias-fourth-climate-change-assessment, www.arb.ca.gov/cc/cc.htm, and https://www.dgs.ca.gov/BSC/Codes.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the U.S. EPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, the rules will be fully implemented, and new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.

[6] Switching electricity generation from fossil fuels to clean sources.

California Global Warming Solutions Act of 2006 (Assembly Bill 32, and Senate Bill 32, and Assembly Bill 1279)

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

Senate Bill (SB) 32, signed into law on September 8, 2016, extends AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of 6 MT CO_2e by 2030 and 2 MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the State (CARB 2017).

AB 1279, "The California Climate Crisis Act," was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The Draft 2022 Scoping Plan Update has been prepared to assess the progress towards the 2030 target as well as to outline a plan to achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities (CARB 2022).

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan

(RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") can receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Metropolitan Transportation Commission (MTC)/Association of Bay Area Government (ABAG) was assigned targets of a 10 percent reduction GHGs from per capita GHG emissions from passenger vehicles by 2020 and a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035. The MTC/ABAG adopted the Plan Bay Area 2040 in July 2017, which meets the requirements of SB 375. MTC/ABAG are currently in the process of updating this RTP/SCS with the Plan Bay Area 2050 document. The draft environmental impact report for the Plan Bay Area 2050 is currently being prepared.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statues of 2016) requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the former Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

Clean Energy, Jobs, and Affordability Act of 2022 (Senate Bill 1020)

Adopted on September 16, 2022, SB 1020 creates clean electricity targets for eligible renewable energy resources and zero-carbon resources to supply 90 percent of retail sale electricity by 2035, 95 percent by 2040, 100 percent by 2045, and 100 percent of electricity procured to serve all state agencies by 2035. This bill shall not increase carbon emissions elsewhere in the western grid and shall not allow resource shuffling.

California Building Standards Code

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality." The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality.

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, which go into effect on January 1, 2023. The 2022 standards continue to improve upon the previous (2019) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings (CEC 2022a). The 2022 Title 24 Standards "build on California's technology innovations, encouraging energy efficient approaches to encourage building decarbonization, emphasizing in particular on heat pumps for space heating and water heating. This set of Energy Codes also extends the benefits of photovoltaic and battery storage systems and other demand flexible technology to work in combinations with heat pumps to enable California buildings to be responsive to climate change. This Energy code also strengthens ventilation standards to improve indoor air quality. This update provides crucial steps in the state's progress toward 100 percent clean carbon neutrality by midcentury" (CEC 2022b). The 2022 Energy Code is anticipated to reduce GHG emissions by 10 MMT of CO_2e over the next 30 years and result in approximately 1.5 billion dollars in consumer savings (CEC 2022c). Compliance with Title 24 is enforced through the building permit process.

Regional and Local Regulations

Bay Area Air Quality Management District

In 2013, the BAAQMD adopted resolution no. 2013-11, "Resolution Adopting a Greenhouse Gas Reduction Goal and Commitment to Develop a Regional Climate Protection Strategy" that builds on state and regional climate protection efforts by (BAAQMD 2013):

1. Setting a goal for the Bay Area region to reduce GHG emissions by 2050 to 80 percent below 1990 levels

2. Developing a Regional Climate Protection Strategy to make progress towards the 2050 goal, using BAAQMD's Clean Air Plan to initiate the process
3. Developing a 10-point work program to guide the BAAQMD's climate protection activities in the near-term

The BAAQMD is currently developing the Regional Climate Protection Strategy and has outlined the 10-point work program, which includes policy approaches, assistance to local governments, and technical programs that will help the region make progress toward the 2050 GHG emissions goal.

The BAAQMD is responsible for enforcing standards and regulating stationary sources in its jurisdiction, including the San Francisco Bay Area Air Basins and the City of Burlingame. The BAAQMD regulates GHG emissions through specific rules and regulations, as well as project and plan level emissions thresholds for GHGs to ensure that new land use development in the San Francisco Bay Area Air Basin contributes to its fair share of emissions reductions (BAAQMD 2017a).

Plan Bay Area 2050

Plan Bay Area 2050 is a state-mandated, integrated long-range transportation, land-use, and housing plan that would support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area (MTC/ABAG 2021). The SCS builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. Plan Bay Area 2050 focuses on advancing equity and improving resiliency in the Bay Area by creating strategies in the following four elements: Housing, Economy, Transportation, and Environment. The Plan discusses how the future is uncertain due to anticipated employment growth, lack of housing options, and outside forces, such as climate change and economic turbulence. These uncertainties will impact growth in the Bay Area and exacerbate issues for those who are historically and systemically marginalized and underserved and excluded. Thus, Plan Bay Area 2050 has created strategies and considered investments that will serve those systemically underserved communities and provide equitable opportunities. The Plan presents a total of 35 strategies to outline how the $1.4 trillion dollar investment would be utilized. The strategies include, but are not limited to, the following: providing affordable housing, allowing higher-density in proximity to transit-corridors, optimizing the existing roadway network, creating complete streets, providing subsidies for public transit, reducing climate emissions, and expanding open space area. Bringing these strategies to fruition will require participation by agencies, policymakers, and the public. An implementation plan is also included as part of the Plan to assess the requirements needed to carry out the strategies, identify the roles of pertinent entities, create an appropriate method to implement the strategies, and create a timeline for implementation (ABAG/MTC 2021).

City of Burlingame General Plan

Chapter 9, Health, of the City of Burlingame's General Plan contains the following goal and policies related to global climate change and GHGs applicable to the project (City of Burlingame 2019):

- **Goal HP-2: Achieve greenhouse gas emissions reductions consistent with State goals.**
- **Policy HP-2.1: Municipal Greenhouse Gas Inventory.** Continue to partner with San Mateo County's Regionally Integrated Climate Action Planning Suite (RICAPS) to prepare annual Municipal Greenhouse Gas inventories.

- **Policy HP-2.2: Community Greenhouse Gas Inventory.** Continue the partnership with the San Mateo County RICAPS to prepare annual community-wide greenhouse gas inventories.
- **Policy HP-2.3: Greenhouse Gas Reduction Targets.** Work to achieve greenhouse gas emissions reductions locally that are consistent with the targets established by AB 32 (California Global Warming Solutions Act of 2006) and subsequent supporting legislation.
- **Policy HP-2.4: Electric Vehicles.** Prepare an Electric Vehicle Strategic Plan to support and expand Burlingame's electric vehicle network and public charging stations. Establish parking standards that prioritize electric vehicle spaces. Require new residential developments to install or be pre-wired for electric vehicle charging stations.
- **Policy HP-2.5: Municipal Electric Vehicles.** Purchase electric vehicles as replacements for gasoline-powered vehicles in the City's fleet as appropriate. Install electric vehicle charging stations to incentivize City employees to use electric vehicles.
- **Policy HP-2.6: Renewable Energy.** Maintain the policy of using 100% renewable energy for the City's municipal accounts. Encourage residents and businesses to opt up to 100% renewable purchase for additional community-wide greenhouse gas reductions. Encourage and support opportunities for developing local solar power projects.
- **Policy HP-2.7: Residential Solar Power.** Encourage homeowners to install solar power systems. Provide information to homeowners on the benefits of solar power and funding opportunities. Promote Property Assessed Clean Energy (PACE) programs that finance renewable energy systems. Offer incentives for home solar power systems.
- **Policy HP-2.8: Energy Efficiency.** Support energy efficiency improvements in the aging building stock citywide. Encourage energy efficiency audits and upgrades at the time of sale for existing homes and buildings. Host energy efficiency workshops, and distribute information to property owners, tenants, and residents. Publicize available programs such as PACE financing and San Mateo Energy Watch programs. Incentivize low-cost retrofits to residents and businesses.
- **Policy HP-2.9: Municipal Energy Efficiency.** Continue to enhance energy efficiency in City facilities. Conduct periodic energy audits to assess energy efficiency progress and needed improvements.
- **Policy HP-2.10: Municipal Green Building.** Aim for new construction and major renovations of City facilities to be zero net energy.
- **Policy HP-2.11: Innovative Technologies.** Encourage the advancement of emerging technologies and innovations around energy, waste, water, and transportation. Support local green technology businesses. Explore demonstration project opportunities.
- **Policy HP-2.12: Green Businesses**. Attract green technology businesses to Burlingame. Focus outreach on established and new green technology businesses along Rollins Road. Encourage existing businesses to integrate green practices by offering an annual green business award, workshops, and informational materials.
- **Policy HP-2.13: Composting.** Expand composting services to multi-family residential buildings and commercial buildings
- **Policy HP-2.14: Zero Waste.** Encourage the South Bayside Waste Management Authority (SBWMA) to explore and consider rate plans that support zero waste goals. Identify

opportunities to support and implement zero waste goals and strategies for the City and community.

- **Policy HP-2.15: Alternative Fuel.** Purchase electric or hybrid models of lawn and garden and construction equipment for City maintenance operations, as feasible.
- **Policy HP-2.16: Electrification of Yard and Garden Equipment.** Support the transition of yard and garden equipment from gasoline to electric fuel sources.
- **Policy HP-2.17: Alternatively-Powered Residential Water Heaters.** Support the transition from tank-based, natural gas water heaters to solar, or electrically-powered water heaters in residential development.

City of Burlingame Climate Action Plan Update

The City of Burlingame first adopted its Climate Action Plan (CAP) in 2009 and recently updated their targets and strategies in the 2030 CAP Update adopted in 2019. The 2030 CAP is a qualified CAP under CEQA Guidelines 15183.5(b)(1) since it quantifies GHG emissions; establishes a level below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable; identifies and analyzes GHG emissions resulting from specific actions or categories of actions; specifies a group of measures that if implemented on a project-by-project basis would collectively achieve the specified emissions level; establishes a mechanism to monitor the plan's progress towards achieving the specified emissions level; and is adopted in a public process following environmental review through an Addendum (City of Burlingame 2019). The 2030 CAP Update GHG emission reduction targets are:

- 2020: Reduce annual GHG emissions by 15 percent below the City's 2005 GHG emission baseline inventory (comparable to 1990 levels)
- 2030: Reduce annual GHG emissions by 40 percent below 1990 levels
- 2040: Reduce annual GHG emissions by 60 percent below 1990 levels
- 2050: Reduce annual GHG emissions by 80 percent below 1990 levels

The City's GHG emission reduction strategy is based on the Burlingame General Plan, and the 2030 CAP Update acts as the implementation tool for climate action. The 2030 CAP Update includes 20 measures, which are either new policies that are introduced or policies already existing in the Burlingame General Plan. The following reduction measures are applicable to the project:

- **Reduction Measure 1:** Mixed Use Development, Transit Oriented Development, and Transit Supporting Land Use
- **Reduction Measure 2:** Transportation Demand Management
- **Reduction Measure 6:** Electric Vehicle Infrastructure and Initiatives
- **Reduction Measure 9:** Electrification of Yard and Garden Equipment
- **Reduction Measure 10:** Construction Best Management Practices
- **Reduction Measure 11:** Green Building Practices and Standards
- **Reduction Measure 12:** Energy Efficiency
- **Reduction Measure 13:** Peninsula Clean Energy ECO100
- **Reduction Measure 14:** Residential Solar Power
- **Reduction Measure 15:** Alternatively-Powered Residential Water Heaters

- **Reduction Measure 17:** Water Conservation for New Residential Development
- **Reduction Measure 18:** Zero Waste

3.2 Impact Analysis

a. Thresholds of Significance

To determine whether a project would result in a significant impact related to GHG emissions, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Individual projects do not generate enough GHG emissions to create significant project-specific environment effects. However, the environmental effects of a project's GHG emissions can contribute incrementally to cumulative environmental effects that are significant, contributing to climate change, even if an individual project's environmental effects are limited (*CEQA Guidelines* Section 15064[h][1]). The issue of a project's environmental effects and contribution towards climate change typically involves an analysis of whether a project's contribution towards climate change is cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA Guidelines* Section 15064[h][1]).

CEQA Guidelines Section 15064.4 recommends that lead agencies quantify GHG emissions of projects and consider several other factors that may be used in the determination of significance of GHG emissions from a project, including the extent to which the project may increase or reduce GHG emissions; whether a project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to implement a plan for the reduction or mitigation of GHG emissions. *CEQA Guidelines* Section 15064.4 does not establish a threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, as long as any threshold chosen is supported by substantial evidence (see *CEQA Guidelines* Section 15064.7[c]).

BAAQMD recently adopted updated thresholds for evaluating the significance of climate impacts from plan-level projects on April 20, 2022. The updated thresholds state that a plan-level project must either meet the State's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). As discussed above under Regulatory Setting, the City of Burlingame's 2030 CAP Update includes a GHG emissions inventory; reduction targets for the years 2020 through 2050; forecast projected emissions for activities covered by the Burlingame General Plan; quantification of reduction measures and evaluation of whether General Plan policies and CAP Update actions would collectively achieve the City's GHG reduction targets; a monitoring and reporting process; and adoption in a public process following environmental review. Therefore, since the City's 2030 CAP Update constitutes as a qualified CAP, the project would result in less than significant impacts if it would be consistent with the 2030 CAP Update.

b. Findings of the Burlingame 2040 General Plan EIR

The Burlingame 2040 General Plan EIR found that the city's community-wide emissions are projected to meet BAAQMD's efficiency metric for 2020 despite being unable to meet their established goal of reducing community-wide emissions in 2020 to 15 percent below 2005 levels. Additionally, although the city's emissions would be consistent with the 2017 Scoping Plan's annual efficiency target for 2030, annual GHG emissions in 2040 would be inconsistent by approximately 1.3 MT CO_2e per capita. Based on the regulations and policies in the 2040 General Plan, it was determined to be unclear whether the City of Burlingame would be able to achieve the State's long-term goal of reducing GHG emissions to 60 percent below 1990 levels by 2040 and 80 percent below 1990 levels by 2050. Even with implementation of Mitigation Measure 10-1, which required the implementation of additional policies for bicycle sharing, increasing the usage of available shuttles, and increasing ECO100 enrollment within the 2040 General Plan, impacts would still be significant and unavoidable since the city was unable to conclusively demonstrate that implementation of the 2040 General Plan would not generate GHG emissions that exceed the city's existing Year 2020 and future Year 2030 and Year 2040 GHG reduction goals.

The Burlingame 2040 General Plan EIR found that the 2040 General Plan would conflict with the 2017 Scoping Plan since it would be inconsistent with the State GHG reduction goals and therefore would not support the overarching goals of the 2017 Scoping Plan; Plan Bay Area 2040 since it cannot be assured that the implementation of the Downtown Specific Plan (adopted in 2010) and the North Burlingame/Rollins Road Specific Plan (amended in 2007) would reduce per capita passenger vehicle and light duty truck CO2 emissions by seven percent by 2020 and 15 percent by 2035, as compared to the 2005 baseline, and therefore would be inconsistent with the Plan Bay Area 2040 goal to reduce per capita CO_2 emissions from passenger vehicles and light duty trucks by 15 percent by 2035; and lastly the 2017 Clean Air Plan since it would be inconsistent with the Plan's goal to reduce GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. Therefore, the 2040 General Plan would be inconsistent with the above-mentioned plans and impacts would be significant and unavoidable.

Impact 1: Increases in GHG Emissions & Impact 2: GHG Plan Consistency

Project Consistency with 2030 CAP Update

Table 9 shows the project's consistency with applicable 2030 CAP Update actions. As shown in Table 9, the North Rollins Specific Plan would be consistent with applicable actions from the City's 2030 CAP Update. As discussed above under Thresholds of Significance, BAAQMD's updated thresholds state that a plan-level project would have less than significant impact if it would be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b). Since the 2030 CAP Update is a qualified CAP, and the proposed project would be consistent with applicable actions within, this impact would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Table 9 Project Consistency with Applicable Climate Action and Adaptation Plan Actions

Recommended Actions	Project Consistency
Reduction Measure 1: Mixed Use Development, Transit Oriented Development, and Transit Supporting Land Use	
Action: The City shall facilitate and encourage mixed-use and high-density residential development near major transit nodes, consistent with the land use map contained in the Envision Burlingame General Plan. Mixed-use and high density residential developments are located along Broadway, El Camino Real, in the Downtown Specific Planning Area, and other locations throughout the city.	**Consistent:** The North Rollins Specific Plan would decrease the amount of office and industrial uses compared to the General Plan EIR, and would encourage denser residential development and an increased number of multi-family housing units compared to the General Plan EIR, in a location near the Millbrae Transit Center (approximately 1,100 feet north of the project area). The Millbrae Transit Center provides access to Caltrain, BART, SamTrans, and local community shuttle services.
Reduction Measure 2: Transportation Demand Management	
Action: The City shall require new multi-unit residential developments of 10 units or more and commercial developments of 10,000 square feet or more to incorporate TDM strategies that achieve a 20% reduction in trip generation rates below the standard rate published in the latest Institute of Transportation Engineers (ITE) Trip Generation Manual (10th edition), or other reputable source. This trip reduction level may be achieved through site design, transit, bicycle, shuttle, parking restriction, carpooling, or other TDM measures. All TDM plans shall have a designated coordinator who will track the effectiveness of the TDM Program over time and provide a report to city staff annually regarding the effectiveness of the TDM plan. The City shall coordinate with businesses in the Burlingame Avenue Commercial Area and the Broadway Commercial Area to identify and implement actions and strategies that would reduce single-occupancy car trips and VMT. Strategies may include, but are not limited to: carpooling, designated parking for clean air and ridesharing vehicles, transit subsidies, bicycle parking, and employer sponsored shuttles.	**Consistent:** Pursuant to Chapter 25.43 of the BMC, all future multi-family development projects facilitated by the North Rollins Specific Plan with 10 units or more as well as commercial developments of 10,000 square feet or more would be required to incorporate TDM strategies that are 20 percent lower than the standard rates as established in the most recent edition of the ITE Trip Generation Manual.
Reduction Measure 6: Electric Vehicle Infrastructure and Initiatives	
Action: The City shall target the installation of three public EV stations by 2020, 25 charging stations by 2030, 50 by 2040, and 75 by 2050. The City shall require new residential development to include Level 2 charging stations. The City will work with the County of San Mateo and Peninsula Clean Energy to extend and expand rebates and incentives for Level 2 charging stations. The Level 2 charging station requirement will be enacted through an amendment to the Municipal Code by 2020. The amendments shall affect the portion of the Municipal Code covering the 2019 California Building Standards Code, CALGreen (Title 24, Part 11). Single- and multi-family homes (less than or equal to 20 units) shall be constructed such that each home/unit has at least one dedicated parking space with electric vehicle supply equipment (EVSE) installed. The City shall work with Peninsula Clean Energy and the San Mateo County Office	**Consistent.** For future multi-family development facilitated by the North Rollins Specific Plan, pursuant to Ordinance 1980, 10 percent of dwelling units with parking spaces would be required to be provided with at least one Level 2 EV Ready space, and the remaining dwelling units with parking space(s) would be required to be provided with at least one Level 1 EV Ready space and have conduit installed to accommodate potential future Level 2 charging demands (City of Burlingame 2020a). For future single-family development and multi-family development with less than or equal to 20 units, each home or unit would be required to include one EVSE parking space. Additionally, pursuant to Ordinance 1981, for future development with 50 percent or greater occupied floor area designated for office uses, when 10 or more parking spaces are constructed and designated to office use, 10

Recommended Actions	Project Consistency
of Sustainability to develop specific language for the amendment. In addition, the City shall develop an Electric Vehicle Strategic Plan (EVSP) that identifies existing charging facilities and EV ownership characteristics in the city, priority areas for installing new public EV infrastructure, opportunities for public/private partnerships, and potential City constraints towards supporting local and statewide goals for EV mode share in 2030 and beyond. The EVSP shall identify and document the actions the City will take each year to promote increased EV use including, but not limited to: 1) partnering with the San Mateo County Office of Sustainability to maximize eff orts on expanding the use and purchase of EVs; 2) providing robust information on the City's website and at City functions regarding the benefits of EVs; 3) encouraging the installation of Level 2 high-speed chargers in residential and commercial developments; 4) seeking opportunities to install signs and other wayfinding devices to assist with locating EV charging infrastructure; 5) developing a task force or working group comprised of City staff and representatives of local automobile dealerships to identify and coordinate regional EV rebate programs, promotions, and other opportunities for EV awareness; and 6) identify a strategy for electrifying the City's existing, municipal vehicle fleet.	percent of the designated parking spaces shall be equipped with Level 2 EV Charging space, and an additional 10 percent of the designated spaces shall be provided with at least Level 1 EV Ready spaces (City of Burlingame 2020b).
Reduction Measure 9: Electrification of Yard and Garden Equipment	
Action: The City shall adopt an ordinance prohibiting the use of gasoline- and diesel-powered yard and garden equipment within Burlingame. The City shall explore incentive options for residents and entities who voluntarily transition to electric equipment before the ordinance is enacted.	**Consistent**: Consistent with AB 1346, which would ban the sale of gas-powered yard and garden equipment by 2024, future residents would be prohibited to use gasoline- and diesel-powered yard and garden equipment within Burlingame.
Reduction Measure 10: Construction Best Management Practices	
Action: During the environmental review process, the City shall encourage contractors and developers to voluntarily commit to using a construction contractor that utilizes alternative fuels, and/or employ the use of electrically powered pieces of construction equipment. By 2025, the City will pass an ordinance prohibiting the use of petroleum-based fuel sources for construction equipment less than 120 horsepower unless otherwise demonstrated that no alternative, feasible solutions exist (i.e., such equipment shall be run on a zero GHG emission fuel source).	**Consistent**: In accordance with General Plan Policy HP-3.12, construction activities for future projects facilitated by the North Rollins Specific Plan would be required to implement BAAQMD's Basic Construction Mitigation Measures to reduce pollution from dust and exhaust. Additionally, future development would be required to comply with the City's ordinance prohibiting the use of petroleum-based fuel sources for construction equipment less than 120 horsepower once it is adopted.
Reduction Measure 11: Green Building Practices and Standards	
Action: The City shall encourage new residential and non-residential development to comply with the State's Tier 1 and Tier 2 voluntary energy efficiency provisions. The City shall provide project proponents with information on the benefits of designing their buildings to the Tier 1 and Tier 2 standards during the environmental or building permit review process. The City shall explore ways to eliminate natural gas consumption in new development by restricting and/or	**Consistent**: Future development facilitated by the North Rollins Specific Plan would be required to comply with the energy and sustainability standards of Title 24 (including the California Energy Code and CALGreen) and the City's associated amendments that are in effect at that time. The city's Reach Code requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame

Recommended Actions	Project Consistency
banning natural gas utility infrastructure from being supplied to new structures. Alternatively, the City may explore ways to restrict and/or ban the installation of appliances that consume natural gas (e.g., cooking ranges, water heaters, etc.).	2020). Additionally, Section 4.4.3 of the North Rollins Specific Plan includes guidelines for sustainable lighting such as using high-efficacy solid-state light emitting diode (LED) lighting for outdoor applications and using appropriate color spectral distribution to reduce glare.
Reduction Measure 12: Energy Efficiency	
Action: The City shall encourage energy efficiency audits and upgrades at the time of sale for existing homes and buildings, host up to three energy efficiency workshops per year, and distribute information to property owners, tenants, and residences. The City shall encourage those doing major remodels, both residential and nonresidential, to comply with the voluntary CALGreen tiers that reach beyond the current State code requirements. During the permitting processes, the City shall provide project proponents with information on the benefits of designing their buildings to the Tier 1 and Tier 2 standards.	**Consistent**: Future development facilitated by the North Rollins Specific Plan would be required to comply with the energy and sustainability standards of Title 24 (including the California Energy Code and CALGreen) and the City's associated amendments that are in effect at that time. The city's Reach Code requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, Section 4.4.3 of the North Rollins Specific Plan includes guidelines for sustainable lighting such as using high-efficacy solid-state LED lighting for outdoor applications and using appropriate color spectral distribution to reduce glare.
Reduction Measure 13: Peninsula Clean Energy ECO100	
Action: The City shall support Peninsula Clean Energy's (PCE's) goal of sourcing 100% of its electricity from GHG-free sources by 2021 by keeping all municipal accounts in ECO100 and encouraging community members to do the same. The City shall provide information on the benefits of ECO100 to its citizens through community outreach (e.g., flyers at City events, electronic newsletters, etc.).	**Consistent:** Electricity for future development would be supplied by PCE. Future residents would be placed in PCE's default plan, ECOplus, which sources 100 percent GHG free electricity. Future residents would also have the option to upgrade to PCE's ECO100 plan, which sources 100 percent renewable energy.
Reduction Measure 14: Residential Solar Power	
Action: The City shall continue promoting PACE programs through community outreach (e.g., signage, flyers at City events, social media, etc.) and providing information about PACE programs on a City webpage.	**Consistent:** The city's Reach Code requires inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, pursuant to Section 5.7h of the North Rollins Specific Plan, for any new multi-unit residential projects with less than 10,000 square feet of gross floor area, a minimum of 3kW PV system should be installed, and for multi-unit residential projects with 10,000 square feet or more gross floor area, a minimum of 5kW PV system should be installed (City of Burlingame 2019).
Reduction Measure 15: Alternatively-Powered Residential Water Heaters	
Action: The City shall provide permittees with information on the benefits of installing alternatively-powered water heating systems during the permit process, and work with PCE to establish rebate programs for building electrification.	**Consistent:** The city's Reach Code requires all-electric new construction, and bans natural gas for water heating.
Reduction Measure 17: Water Conservation for New Residential Development	
Action: The City shall require that new residential developments include the installation of Energy Star rated dishwashers and clothes washers, as well as low-flow faucets, shower heads, and toilets. In addition,	**Consistent:** Future development facilitated by the North Rollins Specific Plan would be required to comply with the Model Water Efficient Landscape Ordinance (MWELO) and BMC Chapter 18.17, which outlines requirements for water conservation in landscape.

Recommended Actions	Project Consistency
encourage the use of grey water systems for outdoor water use.	Additionally, future construction would be required to include fixtures that comply with the efficiency standards listed in the Indoor Water Use Efficiency Table pursuant to Section 18.19.050 of the BMC.
Reduction Measure 18: Zero Waste	
Action: The City (i.e., Sustainability Coordinator) shall coordinate with Recology and other applicable waste utility providers to reduce the amount of organic and recyclable materials going to the landfill and increase the waste diversions rate. The City shall perform community outreach (e.g., flyers, electronic newsletters, etc.) informing community members and businesses of the environmental benefits of reducing waste and disposing of items properly. In addition, the City shall also develop a Community Zero Waste Plan to guide the community in diverting its waste from landfill disposal, manage resources to their highest and best use, and identify ways to reduce waste at the source. The Community Zero Waste Plan shall set forth specific strategies, implementation goals, and quantifiable metrics to track progress of the Plan.	**Consistent:** New projects with a valuation of $50,000 or more would be required to submit and obtain approval of a Waste Reduction Plan prior to issuance of a building permit. Additionally, future development facilitated by the North Rollins Specific Plan would be required to recycle and compost organic wastes pursuant to SB 1383. Future multi-family building owners would be required to enroll in Recology's composting program, where green composting bins and outreach materials for tenants would be provided (City of Burlingame 2022b).

Source: City of Los Altos 2022a

Project Consistency with 2022 Scoping Plan

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045, and reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals since future development would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the AB 341 waste diversion goal of 75 percent and recycle organic wastes pursuant to SB 1383. Future development facilitated by the project would also be located in proximity to the Millbrae Transit Center which would reduce reliance on single-occupancy vehicles and VMT. The city's Reach Code also requires all-electric new construction, and inclusion of solar systems in the form of a solar zone with a total area no less than 15 percent of the total roof area of the building (City of Burlingame 2020). Additionally, future development would receive electricity from PCE, which sources 100 percent GHG free electricity under its ECOplus base plan. Therefore, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant. The project would not result in new or substantially more significant impacts than those identified in the 2040 General Plan EIR.

Potential Emissions Generated by the Proposed HEU

For informational purposes, GHG emissions associated with development under the proposed project are shown in Table 10. Since the city's Reach Code requires all-electric construction for

future residential and commercial uses, it was assumed that the natural gas demand estimated for the project excluding industrial uses would instead be supplied by electricity to account for increased electricity usage. As shown in the table, the proposed project would generate 13,977 $MTCO_2e$ per year, which would increase the number of emissions compared to existing conditions under the 2040 General Plan by 353 $MTCO_2e$ per year.

Table 10 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO_2e)
Proposed Project	
Project Operational	
Mobile	9,235
Area	111
Energy	3,627
Water	370
Solid Waste	606
Refrigerants	28
Total Emissions from Proposed Project	**13,977**
Existing Uses (General Plan Maximum Allowed)	
Existing Operational	
Mobile	8,778
Area	91
Energy	3,752
Water	371
Solid Waste	600
Refrigerants	32
Total Emissions from Existing Uses	**13,624**
Total Net New Emissions (Proposed Project minus Existing Uses)	**353**

Source: Table 2.5 in GHG CalEEMod worksheets, see Appendix A for calculations and for GHG emission factor assumptions.

4 References

Air Quality

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Appendix A

California Emissions Estimator Model Results for Greenhouse Gases

North Rollins Specific Plan - Existing (2040 GP) GHG Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	North Rollins Specific Plan - Existing (2040 GP) GHG
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	44.8
Location	Rollins Rd, Burlingame, CA, USA
County	San Mateo
City	Burlingame
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1238
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	1,199	Dwelling Unit	31.6	1,151,040	0.00	0.00	3,453	—
General Office Building	174	1000sqft	4.00	174,083	0.00	0.00	—	—

Research & Development	139	1000sqft	3.20	139,266	0.00	0.00	—	—
Industrial Park	696	1000sqft	16.0	696,331	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	42.6	91.6	30.1	330	0.72	1.59	26.2	27.8	1.60	4.59	6.18	1,686	101,572	103,257	111	3.70	219	107,365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	28.4	78.3	31.5	212	0.69	1.50	26.2	27.7	1.49	4.59	6.08	1,686	98,476	100,162	112	3.90	194	104,309
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	30.5	80.8	17.8	232	0.55	0.59	22.9	23.5	0.59	4.01	4.59	1,686	76,567	78,253	111	3.55	203	82,290
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.56	14.8	3.25	42.3	0.10	0.11	4.18	4.28	0.11	0.73	0.84	279	12,677	12,956	18.4	0.59	33.6	13,624

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	26.7	24.8	12.8	209	0.62	0.21	26.2	26.4	0.20	4.59	4.78	—	62,609	62,609	1.90	1.88	25.6	63,244
Area	15.4	66.6	12.8	117	0.08	1.04	—	1.04	1.07	—	1.07	0.00	15,384	15,384	0.30	0.03	—	15,401
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	22,479	22,479	3.25	0.35	—	22,663
Water	—	—	—	—	—	—	—	—	—	—	—	649	1,100	1,749	2.41	1.44	—	2,239
Waste	—	—	—	—	—	—	—	—	—	—	—	1,036	0.00	1,036	104	0.00	—	3,625
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193	193
Total	42.6	91.6	30.1	330	0.72	1.59	26.2	27.8	1.60	4.59	6.18	1,686	101,572	103,257	111	3.70	219	107,365
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	26.5	24.6	15.3	203	0.59	0.21	26.2	26.4	0.20	4.59	4.78	—	59,876	59,876	2.08	2.09	0.66	60,552
Area	1.38	53.4	11.8	5.04	0.08	0.96	—	0.96	0.96	—	0.96	0.00	15,021	15,021	0.28	0.03	—	15,037
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	22,479	22,479	3.25	0.35	—	22,663
Water	—	—	—	—	—	—	—	—	—	—	—	649	1,100	1,749	2.41	1.44	—	2,239
Waste	—	—	—	—	—	—	—	—	—	—	—	1,036	0.00	1,036	104	0.00	—	3,625
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193	193
Total	28.4	78.3	31.5	212	0.69	1.50	26.2	27.7	1.49	4.59	6.08	1,686	98,476	100,162	112	3.90	194	104,309
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	23.0	21.3	12.6	172	0.52	0.18	22.9	23.1	0.17	4.01	4.18	—	52,440	52,440	1.76	1.76	9.64	53,019
Area	6.97	59.2	0.78	55.5	< 0.005	0.06	—	0.06	0.08	—	0.08	0.00	549	549	0.01	< 0.005	—	550
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	22,479	22,479	3.25	0.35	—	22,663
Water	—	—	—	—	—	—	—	—	—	—	—	649	1,100	1,749	2.41	1.44	—	2,239
Waste	—	—	—	—	—	—	—	—	—	—	—	1,036	0.00	1,036	104	0.00	—	3,625
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193	193

Total	30.5	80.8	17.8	232	0.55	0.59	22.9	23.5	0.59	4.01	4.59	1,686	76,567	78,253	111	3.55	203	82,290
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.20	3.90	2.29	31.5	0.09	0.03	4.18	4.21	0.03	0.73	0.76	—	8,682	8,682	0.29	0.29	1.60	8,778
Area	1.27	10.8	0.14	10.1	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	90.9	90.9	< 0.005	< 0.005	—	91.1
Energy	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,722	3,722	0.54	0.06	—	3,752
Water	—	—	—	—	—	—	—	—	—	—	—	108	182	290	0.40	0.24	—	371
Waste	—	—	—	—	—	—	—	—	—	—	—	172	0.00	172	17.1	0.00	—	600
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.0	32.0
Total	5.56	14.8	3.25	42.3	0.10	0.11	4.18	4.28	0.11	0.73	0.84	279	12,677	12,956	18.4	0.59	33.6	13,624

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	13.9	13.0	6.34	101	0.29	0.10	12.3	12.4	0.09	2.16	2.25	—	29,543	29,543	0.95	0.93	12.0	29,855
General Office Building	3.87	3.58	1.95	32.7	0.10	0.03	4.20	4.23	0.03	0.73	0.77	—	9,993	9,993	0.29	0.29	4.10	10,091
Research & Development	3.58	3.31	1.80	30.2	0.09	0.03	3.88	3.91	0.03	0.68	0.71	—	9,242	9,242	0.27	0.27	3.79	9,333

Industrial Park	5.36	4.95	2.70	45.2	0.14	0.05	5.81	5.85	0.04	1.02	1.06	—	13,831	13,831	0.40	0.40	5.67	13,966
Total	26.7	24.8	12.8	209	0.62	0.21	26.2	26.4	0.20	4.59	4.78	—	62,609	62,609	1.90	1.88	25.6	63,244
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	13.8	12.9	7.56	99.5	0.28	0.10	12.3	12.4	0.09	2.16	2.25	—	28,261	28,261	1.05	1.03	0.31	28,593
General Office Building	3.84	3.54	2.33	31.2	0.09	0.03	4.20	4.23	0.03	0.73	0.77	—	9,555	9,555	0.31	0.32	0.11	9,658
Research & Development	3.55	3.27	2.15	28.9	0.09	0.03	3.88	3.91	0.03	0.68	0.71	—	8,837	8,837	0.29	0.30	0.10	8,933
Industrial Park	5.31	4.90	3.22	43.2	0.13	0.05	5.81	5.85	0.04	1.02	1.06	—	13,224	13,224	0.43	0.44	0.15	13,367
Total	26.5	24.6	15.3	203	0.59	0.21	26.2	26.4	0.20	4.59	4.78	—	59,876	59,876	2.08	2.09	0.66	60,552
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	2.36	2.20	1.23	16.7	0.05	0.02	2.14	2.15	0.02	0.37	0.39	—	4,459	4,459	0.16	0.16	0.82	4,510
General Office Building	0.52	0.48	0.30	4.20	0.01	< 0.005	0.58	0.58	< 0.005	0.10	0.11	—	1,200	1,200	0.04	0.04	0.22	1,213
Research & Development	0.48	0.44	0.28	3.86	0.01	< 0.005	0.53	0.54	< 0.005	0.09	0.10	—	1,104	1,104	0.03	0.04	0.20	1,115
Industrial Park	0.84	0.77	0.48	6.71	0.02	0.01	0.93	0.93	0.01	0.16	0.17	—	1,919	1,919	0.06	0.06	0.35	1,940
Total	4.20	3.90	2.29	31.5	0.09	0.03	4.18	4.21	0.03	0.73	0.76	—	8,682	8,682	0.29	0.29	1.60	8,778

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	4,015	4,015	0.65	0.08	—	4,055
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,737	2,737	0.44	0.05	—	2,764
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	2,189	2,189	0.35	0.04	—	2,211
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	8,238	8,238	1.33	0.16	—	8,319
Total	—	—	—	—	—	—	—	—	—	—	—	—	17,179	17,179	2.78	0.34	—	17,348
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	4,015	4,015	0.65	0.08	—	4,055
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	2,737	2,737	0.44	0.05	—	2,764
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	2,189	2,189	0.35	0.04	—	2,211

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	8,238	8,238	1.33	0.16	—	8,319
Total	—	—	—	—	—	—	—	—	—	—	—	—	17,179	17,179	2.78	0.34	—	17,348
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	665	665	0.11	0.01	—	671
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	453	453	0.07	0.01	—	458
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	362	362	0.06	0.01	—	366
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	1,364	1,364	0.22	0.03	—	1,377
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,844	2,844	0.46	0.06	—	2,872

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Total	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Total	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	878	878	0.08	< 0.005	—	880

Total	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	878	878	0.08	< 0.005	—	880

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.38	0.69	11.8	5.04	0.08	0.96	—	0.96	0.96	—	0.96	0.00	15,021	15,021	0.28	0.03	—	15,037
Consumer Products	—	46.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	6.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	14.1	13.1	1.00	112	0.01	0.08	—	0.08	0.11	—	0.11	—	362	362	0.02	< 0.005	—	364
Total	15.4	66.6	12.8	117	0.08	1.04	—	1.04	1.07	—	1.07	0.00	15,384	15,384	0.30	0.03	—	15,401
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.38	0.69	11.8	5.04	0.08	0.96	—	0.96	0.96	—	0.96	0.00	15,021	15,021	0.28	0.03	—	15,037
Consumer Products	—	46.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	6.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.38	53.4	11.8	5.04	0.08	0.96	—	0.96	0.96	—	0.96	0.00	15,021	15,021	0.28	0.03	—	15,037

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.05	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	61.3	61.3	< 0.005	< 0.005	—	61.4
Consumer Products	—	8.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.26	1.18	0.09	10.1	< 0.005	0.01	—	0.01	0.01	—	0.01	—	29.6	29.6	< 0.005	< 0.005	—	29.7
Total	1.27	10.8	0.14	10.1	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	90.9	90.9	< 0.005	< 0.005	—	91.1

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	92.9	157	250	0.34	0.21	—	320
General Office Building	—	—	—	—	—	—	—	—	—	—	—	66.1	112	178	0.25	0.15	—	228
Research & Development	—	—	—	—	—	—	—	—	—	—	—	146	248	394	0.54	0.32	—	504

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	344	583	927	1.28	0.76	—	1,186
Total	—	—	—	—	—	—	—	—	—	—	—	649	1,100	1,749	2.41	1.44	—	2,239
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	92.9	157	250	0.34	0.21	—	320
General Office Building	—	—	—	—	—	—	—	—	—	—	—	66.1	112	178	0.25	0.15	—	228
Research & Development	—	—	—	—	—	—	—	—	—	—	—	146	248	394	0.54	0.32	—	504
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	344	583	927	1.28	0.76	—	1,186
Total	—	—	—	—	—	—	—	—	—	—	—	649	1,100	1,749	2.41	1.44	—	2,239
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	15.4	26.1	41.4	0.06	0.03	—	53.0
General Office Building	—	—	—	—	—	—	—	—	—	—	—	10.9	18.5	29.5	0.04	0.02	—	37.7
Research & Development	—	—	—	—	—	—	—	—	—	—	—	24.2	41.0	65.3	0.09	0.05	—	83.5
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	57.0	96.5	153	0.21	0.13	—	196
Total	—	—	—	—	—	—	—	—	—	—	—	108	182	290	0.40	0.24	—	371

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	478	0.00	478	47.8	0.00	—	1,672
General Office Building	—	—	—	—	—	—	—	—	—	—	—	87.3	0.00	87.3	8.72	0.00	—	305
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5.70	0.00	5.70	0.57	0.00	—	20.0
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	465	0.00	465	46.5	0.00	—	1,628
Total	—	—	—	—	—	—	—	—	—	—	—	1,036	0.00	1,036	104	0.00	—	3,625
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	478	0.00	478	47.8	0.00	—	1,672
General Office Building	—	—	—	—	—	—	—	—	—	—	—	87.3	0.00	87.3	8.72	0.00	—	305
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5.70	0.00	5.70	0.57	0.00	—	20.0

Industrial Park	—	—	—	—	—	—	—	—	—	—	—	465	0.00	465	46.5	0.00	—	1,628
Total	—	—	—	—	—	—	—	—	—	—	—	1,036	0.00	1,036	104	0.00	—	3,625
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	79.1	0.00	79.1	7.91	0.00	—	277
General Office Building	—	—	—	—	—	—	—	—	—	—	—	14.4	0.00	14.4	1.44	0.00	—	50.5
Research & Development	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.30
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	77.0	0.00	77.0	7.70	0.00	—	270
Total	—	—	—	—	—	—	—	—	—	—	—	172	0.00	172	17.1	0.00	—	600

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.24	8.24
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.42	0.42

Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.56	3.56
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	181	181
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193	193
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.24	8.24
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.42	0.42
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.56	3.56
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	181	181
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	193	193
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.36	1.36
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.07	0.07
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	30.0

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.0	32.0

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	6,523	5,887	4,904	2,263,198	45,046	40,658	33,868	15,630,164
General Office Building	1,696	385	122	468,474	15,349	3,483	1,103	4,240,816
Research & Development	1,568	265	155	430,693	14,195	2,395	1,399	3,898,812
Industrial Park	2,347	1,769	863	749,048	21,243	16,011	7,816	6,780,695

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	611
Propane Fireplaces	0
Electric Fireplaces	0

No Fireplaces	588
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2330856	776,952	1,514,520	504,840	—

5.10.3. Landscape Equipment

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

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	7,184,012	204	0.0330	0.0040	0.00
General Office Building	4,896,808	204	0.0330	0.0040	0.00
Research & Development	3,917,435	204	0.0330	0.0040	0.00
Industrial Park	14,740,376	204	0.0330	0.0040	16,538,063

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	43,483,414	0.00
General Office Building	30,940,424	0.00
Research & Development	68,476,249	0.00
Industrial Park	161,026,544	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	308	0.00
General Office Building	162	0.00
Research & Development	10.6	0.00
Industrial Park	863	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Research & Development	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Research & Development	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.57	annual days of extreme heat
Extreme Precipitation	6.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

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

6.3. Adjusted Climate Risk Scores

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

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	26.6
AQ-DPM	79.0
Drinking Water	42.7
Lead Risk Housing	59.0
Pesticides	0.00
Toxic Releases	33.9
Traffic	84.8
Effect Indicators	—
CleanUp Sites	50.3
Groundwater	94.1

Haz Waste Facilities/Generators	83.0
Impaired Water Bodies	77.3
Solid Waste	59.2
Sensitive Population	—
Asthma	11.1
Cardio-vascular	6.54
Low Birth Weights	28.8
Socioeconomic Factor Indicators	—
Education	13.1
Housing	61.9
Linguistic	30.0
Poverty	2.12
Unemployment	15.8

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	78.09572693
Employed	97.51058642
Median HI	69.74207622
Education	—
Bachelor's or higher	84.51174131
High school enrollment	13.01167715
Preschool enrollment	89.87552932
Transportation	—
Auto Access	33.77389965

Active commuting	86.84717054
Social	—
2-parent households	82.71525728
Voting	85.46131143
Neighborhood	—
Alcohol availability	21.87860901
Park access	81.35506224
Retail density	86.71885025
Supermarket access	52.05954061
Tree canopy	85.69228795
Housing	—
Homeownership	33.41460285
Housing habitability	50.35288079
Low-inc homeowner severe housing cost burden	35.60887976
Low-inc renter severe housing cost burden	63.17207751
Uncrowded housing	47.26036186
Health Outcomes	—
Insured adults	93.81496215
Arthritis	0.0
Asthma ER Admissions	80.9
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	82.0

Cognitively Disabled	80.8
Physically Disabled	60.6
Heart Attack ER Admissions	93.1
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	75.5
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	20.0
Children	51.6
Elderly	71.6
English Speaking	36.0
Foreign-born	53.2
Outdoor Workers	60.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	50.0
Traffic Density	81.7
Traffic Access	63.9
Other Indices	—
Hardship	5.1

Other Decision Support	—
2016 Voting	81.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	21.0
Healthy Places Index Score for Project Location (b)	90.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Operational model only, default construction
Construction: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Non-flat Coating
Operations: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Non-flat Coating
Operations: Energy Use	Natural gas converted to electricity pursuant to the City's all-electric reach code for residential and commercial: https://www.burlingame.org/departments/building/reach_codes.php

Operations: Water and Waste Water	Assumes all indoor water use, conservative. City of Burlingame Water Treatment Facility 100% aerobic.

North Rollins Specific Plan - Proposed GHG Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	North Rollins Specific Plan - Proposed GHG
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	4.60
Precipitation (days)	44.8
Location	Adrian Ct, Burlingame, CA 94010, USA
County	San Mateo
City	Burlingame
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1201
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	1,557	Dwelling Unit	41.0	1,494,720	0.00	0.00	4,484	—
Research & Development	139	1000sqft	3.20	139,266	0.00	0.00	—	—
Industrial Park	696	1000sqft	16.0	696,331	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	44.1	97.0	33.9	348	0.76	1.87	26.6	28.5	1.88	4.65	6.54	1,722	105,438	107,160	117	3.70	221	111,403
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	29.3	83.2	35.3	216	0.72	1.79	26.6	28.4	1.78	4.65	6.43	1,722	102,280	104,001	117	3.87	196	108,275
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.9	86.4	18.5	246	0.57	0.60	23.9	24.5	0.60	4.18	4.78	1,722	77,469	79,191	116	3.58	206	83,371
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.83	15.8	3.38	44.9	0.10	0.11	4.36	4.47	0.11	0.76	0.87	285	12,826	13,111	19.3	0.59	34.0	13,803

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Mobile	27.2	25.3	13.0	213	0.63	0.21	26.6	26.8	0.20	4.65	4.85	—	63,538	63,538	1.94	1.92	25.9	64,183
Area	16.4	71.5	16.5	132	0.10	1.32	—	1.32	1.35	—	1.35	0.00	19,892	19,892	0.38	0.07	—	19,923
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	20,941	20,941	3.00	0.32	—	21,110
Water	—	—	—	—	—	—	—	—	—	—	—	630	1,067	1,697	2.34	1.40	—	2,172
Waste	—	—	—	—	—	—	—	—	—	—	—	1,092	0.00	1,092	109	0.00	—	3,819
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196	196
Total	44.1	97.0	33.9	348	0.76	1.87	26.6	28.5	1.88	4.65	6.54	1,722	105,438	107,160	117	3.70	221	111,403
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	27.0	25.0	15.5	206	0.60	0.21	26.6	26.8	0.20	4.65	4.85	—	60,765	60,765	2.12	2.12	0.67	61,452
Area	1.80	57.9	15.4	6.54	0.10	1.24	—	1.24	1.24	—	1.24	0.00	19,506	19,506	0.37	0.04	—	19,527
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	20,941	20,941	3.00	0.32	—	21,110
Water	—	—	—	—	—	—	—	—	—	—	—	630	1,067	1,697	2.34	1.40	—	2,172
Waste	—	—	—	—	—	—	—	—	—	—	—	1,092	0.00	1,092	109	0.00	—	3,819
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196	196
Total	29.3	83.2	35.3	216	0.72	1.79	26.6	28.4	1.78	4.65	6.43	1,722	102,280	104,001	117	3.87	196	108,275
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	24.2	22.4	13.2	180	0.54	0.19	23.9	24.1	0.18	4.18	4.36	—	54,790	54,790	1.85	1.85	10.1	55,397
Area	7.23	63.7	0.93	61.9	0.01	0.07	—	0.07	0.08	—	0.08	0.00	671	671	0.02	0.02	—	677
Energy	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	20,941	20,941	3.00	0.32	—	21,110
Water	—	—	—	—	—	—	—	—	—	—	—	630	1,067	1,697	2.34	1.40	—	2,172
Waste	—	—	—	—	—	—	—	—	—	—	—	1,092	0.00	1,092	109	0.00	—	3,819
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196	196
Total	31.9	86.4	18.5	246	0.57	0.60	23.9	24.5	0.60	4.18	4.78	1,722	77,469	79,191	116	3.58	206	83,371
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	4.42	4.10	2.40	32.9	0.10	0.04	4.36	4.40	0.03	0.76	0.80	—	9,071	9,071	0.31	0.31	1.67	9,172
Area	1.32	11.6	0.17	11.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	111	111	< 0.005	< 0.005	—	112

Energy	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	3,467	3,467	0.50	0.05	—	3,495
Water	—	—	—	—	—	—	—	—	—	—	—	104	177	281	0.39	0.23	—	360
Waste	—	—	—	—	—	—	—	—	—	—	—	181	0.00	181	18.1	0.00	—	632
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4
Total	5.83	15.8	3.38	44.9	0.10	0.11	4.36	4.47	0.11	0.76	0.87	285	12,826	13,111	19.3	0.59	34.0	13,803

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	18.0	16.8	8.12	129	0.37	0.13	15.6	15.8	0.12	2.74	2.86	—	37,526	37,526	1.22	1.18	15.3	37,925
Research & Development	3.71	3.41	1.96	33.4	0.10	0.03	4.39	4.42	0.03	0.77	0.80	—	10,419	10,419	0.29	0.29	4.28	10,518
Industrial Park	5.56	5.10	2.93	50.0	0.15	0.05	6.56	6.61	0.05	1.15	1.20	—	15,592	15,592	0.43	0.44	6.41	15,740
Total	27.2	25.3	13.0	213	0.63	0.21	26.6	26.8	0.20	4.65	4.85	—	63,538	63,538	1.94	1.92	25.9	64,183
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	17.8	16.6	9.68	127	0.35	0.13	15.6	15.8	0.12	2.74	2.86	—	35,899	35,899	1.35	1.31	0.40	36,325
Research & Development	3.68	3.37	2.33	31.6	0.10	0.03	4.39	4.42	0.03	0.77	0.80	—	9,960	9,960	0.31	0.32	0.11	10,065
Industrial Park	5.50	5.04	3.49	47.3	0.15	0.05	6.56	6.61	0.05	1.15	1.20	—	14,905	14,905	0.46	0.49	0.17	15,062
Total	27.0	25.0	15.5	206	0.60	0.21	26.6	26.8	0.20	4.65	4.85	—	60,765	60,765	2.12	2.12	0.67	61,452
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	3.05	2.84	1.58	21.3	0.06	0.02	2.71	2.73	0.02	0.47	0.50	—	5,664	5,664	0.20	0.20	1.04	5,729
Research & Development	0.50	0.46	0.30	4.24	0.01	< 0.005	0.60	0.61	< 0.005	0.11	0.11	—	1,244	1,244	0.04	0.04	0.23	1,257
Industrial Park	0.87	0.80	0.52	7.37	0.02	0.01	1.05	1.06	0.01	0.18	0.19	—	2,164	2,164	0.06	0.07	0.40	2,186
Total	4.42	4.10	2.40	32.9	0.10	0.04	4.36	4.40	0.03	0.76	0.80	—	9,071	9,071	0.31	0.31	1.67	9,172

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,214	5,214	0.84	0.10	—	5,265

Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	2,189	2,189	0.35	0.04	—	2,211
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	8,238	8,238	1.33	0.16	—	8,319
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,641	15,641	2.53	0.31	—	15,795
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	5,214	5,214	0.84	0.10	—	5,265
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	2,189	2,189	0.35	0.04	—	2,211
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	8,238	8,238	1.33	0.16	—	8,319
Total	—	—	—	—	—	—	—	—	—	—	—	—	15,641	15,641	2.53	0.31	—	15,795
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	863	863	0.14	0.02	—	872
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	362	362	0.06	0.01	—	366
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	1,364	1,364	0.22	0.03	—	1,377
Total	—	—	—	—	—	—	—	—	—	—	—	—	2,589	2,589	0.42	0.05	—	2,615

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Total	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Industrial Park	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Total	0.49	0.24	4.44	3.73	0.03	0.34	—	0.34	0.34	—	0.34	—	5,300	5,300	0.47	0.01	—	5,315
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Research & Development	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Industrial Park	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	878	878	0.08	< 0.005	—	880
Total	0.09	0.04	0.81	0.68	< 0.005	0.06	—	0.06	0.06	—	0.06	—	878	878	0.08	< 0.005	—	880

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.80	0.90	15.4	6.54	0.10	1.24	—	1.24	1.24	—	1.24	0.00	19,506	19,506	0.37	0.04	—	19,527
Consumer Products	—	49.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	7.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	14.6	13.6	1.12	125	0.01	0.08	—	0.08	0.10	—	0.10	—	386	386	0.02	0.04	—	397
Total	16.4	71.5	16.5	132	0.10	1.32	—	1.32	1.35	—	1.35	0.00	19,892	19,892	0.38	0.07	—	19,923
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	1.80	0.90	15.4	6.54	0.10	1.24	—	1.24	1.24	—	1.24	0.00	19,506	19,506	0.37	0.04	—	19,527
Consumer Products	—	49.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	—	7.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.80	57.9	15.4	6.54	0.10	1.24	—	1.24	1.24	—	1.24	0.00	19,506	19,506	0.37	0.04	—	19,527
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.01	< 0.005	0.07	0.03	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	79.6	79.6	< 0.005	< 0.005	—	79.7
Consumer Products	—	9.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.31	1.23	0.10	11.3	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.5	31.5	< 0.005	< 0.005	—	32.4
Total	1.32	11.6	0.17	11.3	< 0.005	0.01	—	0.01	0.01	—	0.01	0.00	111	111	< 0.005	< 0.005	—	112

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	121	204	325	0.45	0.27	—	416
undefined	—	—	—	—	—	—	—	—	—	—	—	19.0	32.2	51.2	0.07	0.04	—	65.6

Research	—	—	—	—	—	—	—	—	—	—	—	146	248	394	0.54	0.32	—	504
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	344	583	927	1.28	0.76	—	1,186
Total	—	—	—	—	—	—	—	—	—	—	—	630	1,067	1,697	2.34	1.40	—	2,172
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	121	204	325	0.45	0.27	—	416
undefined	—	—	—	—	—	—	—	—	—	—	—	19.0	32.2	51.2	0.07	0.04	—	65.6
Research & Development	—	—	—	—	—	—	—	—	—	—	—	146	248	394	0.54	0.32	—	504
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	344	583	927	1.28	0.76	—	1,186
Total	—	—	—	—	—	—	—	—	—	—	—	630	1,067	1,697	2.34	1.40	—	2,172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	20.0	33.8	53.8	0.07	0.04	—	68.9
undefined	—	—	—	—	—	—	—	—	—	—	—	3.15	5.33	8.48	0.01	0.01	—	10.9
Research & Development	—	—	—	—	—	—	—	—	—	—	—	24.2	41.0	65.3	0.09	0.05	—	83.5
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	57.0	96.5	153	0.21	0.13	—	196
Total	—	—	—	—	—	—	—	—	—	—	—	104	177	281	0.39	0.23	—	360

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	620	0.00	620	62.0	0.00	—	2,171
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5.70	0.00	5.70	0.57	0.00	—	20.0
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	465	0.00	465	46.5	0.00	—	1,628
Total	—	—	—	—	—	—	—	—	—	—	—	1,092	0.00	1,092	109	0.00	—	3,819
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	620	0.00	620	62.0	0.00	—	2,171
Research & Development	—	—	—	—	—	—	—	—	—	—	—	5.70	0.00	5.70	0.57	0.00	—	20.0
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	465	0.00	465	46.5	0.00	—	1,628
Total	—	—	—	—	—	—	—	—	—	—	—	1,092	0.00	1,092	109	0.00	—	3,819
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	103	0.00	103	10.3	0.00	—	359
Research & Development	—	—	—	—	—	—	—	—	—	—	—	0.94	0.00	0.94	0.09	0.00	—	3.30
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	77.0	0.00	77.0	7.70	0.00	—	270
Total	—	—	—	—	—	—	—	—	—	—	—	181	0.00	181	18.1	0.00	—	632

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.7	10.7
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.56	3.56
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	181	181
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196	196
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.7	10.7
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.56	3.56
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	181	181
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	196	196
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.77	1.77
Research & Development	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.59	0.59
Industrial Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.0	30.0
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.4	32.4

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	8,470	7,645	6,368	2,938,949	57,179	51,608	42,989	19,839,941

Research & Development	1,568	265	155	430,693	16,047	2,708	1,582	4,407,347
Industrial Park	2,347	1,769	863	749,048	24,013	18,099	8,836	7,665,124

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	794
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	763
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
3026808	1,008,936	1,170,849	390,283	—

5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	9,329,029	204	0.0330	0.0040	0.00
Research & Development	3,917,435	204	0.0330	0.0040	0.00
Industrial Park	14,740,376	204	0.0330	0.0040	16,538,063

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	56,466,785	0.00
General Office Building	8,901,439	0.00
Research & Development	68,476,249	0.00
Industrial Park	161,026,544	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	400	0.00
Research & Development	10.6	0.00

Industrial Park	863	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Research & Development	Household refrigerators and/or freezers	R-134a	1,430	0.45	0.60	0.00	1.00
Research & Development	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Industrial Park	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	7.10	annual days of extreme heat
Extreme Precipitation	8.60	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	24.0	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

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

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

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

6.3. Adjusted Climate Risk Scores

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	32.8
AQ-DPM	75.5

Drinking Water	42.7
Lead Risk Housing	59.5
Pesticides	0.00
Toxic Releases	33.4
Traffic	81.0
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	78.7
Haz Waste Facilities/Generators	76.7
Impaired Water Bodies	77.3
Solid Waste	84.7
Sensitive Population	—
Asthma	12.4
Cardio-vascular	12.1
Low Birth Weights	63.3
Socioeconomic Factor Indicators	—
Education	25.5
Housing	46.0
Linguistic	47.1
Poverty	32.5
Unemployment	61.5

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	87.66842038

Employed	97.33093802
Median HI	79.13512126
Education	—
Bachelor's or higher	88.73347876
High school enrollment	100
Preschool enrollment	80.93160529
Transportation	—
Auto Access	38.0341332
Active commuting	89.90119338
Social	—
2-parent households	73.4377005
Voting	91.00474785
Neighborhood	—
Alcohol availability	18.79892211
Park access	50.49403311
Retail density	95.36763762
Supermarket access	22.49454639
Tree canopy	83.93430001
Housing	—
Homeownership	32.88848967
Housing habitability	47.09354549
Low-inc homeowner severe housing cost burden	12.75503657
Low-inc renter severe housing cost burden	78.78865649
Uncrowded housing	58.11625818
Health Outcomes	—
Insured adults	83.39535481
Arthritis	0.0

Asthma ER Admissions	79.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	82.3
Cognitively Disabled	74.6
Physically Disabled	86.7
Heart Attack ER Admissions	88.4
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	86.5
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	28.5
Children	22.0
Elderly	57.3
English Speaking	71.6

Foreign-born	37.9
Outdoor Workers	63.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	35.6
Traffic Density	84.2
Traffic Access	87.4
Other Indices	—
Hardship	9.0
Other Decision Support	—
2016 Voting	86.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	94.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Architectural Coatings	BAAQMD Regulation 8 Rule 3
Operations: Energy Use	All electric development for residential and commercial uses pursuant to the City's Reach Code: https://www.burlingame.org/departments/building/reach_codes.php
Operations: Water and Waste Water	City of Burlingame Water Treatment Facility 100% aerobic

Appendix B

Noise Technical Report

North Rollins Specific Plan

Noise Technical Study

prepared for

City of Burlingame
Community Development Department
501 Primrose Road
Burlingame, California 94010

prepared by

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

January 2023

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential noise and vibration impacts of the proposed North Rollins Specific Plan (project) in the City of Burlingame (City). Rincon Consultants, Inc. (Rincon) prepared this study under contract to the City. The purpose of this study is to analyze the project's noise and vibration impacts related to both temporary construction activity and long-term operation of the project. Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

Issue	General Plan EIR Finding	Specific Plan Finding	Does the project result in a new and substantial impact not analyzed in the General Plan EIR?
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant impact with mitigation (Construction) Less than significant impact (Operation)	Less than significant impact with mitigation (Construction) Less than significant impact (Operation)	No
Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Less than significant impact	Less than significant impact	No
For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Less than significant impact	Less than significant impact	No
Would the project conflict with land use compatibility guidelines for noise?	May conflict with land use compatibility noise standards	May conflict with land use compatibility noise standards	No

1.2 Project Summary

Project Location

The North Rollins Road Specific Plan area is approximately 88.8 acres located in the northern portion of the City of Burlingame. Regional access to the site is available via the adjacent US Highway 101 (US 101) to the northeast and via State Route 82 (SR 82) to the southwest. Interstate 280 (I-280) is located approximately 1.3 miles southwest of the project area, and the Millbrae Transit Center is located approximately one-quarter mile to the northwest (City of Burlingame

2022). **Error! Reference source not found.**Figure 1 shows the regional location and Figure 2 shows the project area.

Figure 1 Regional Location

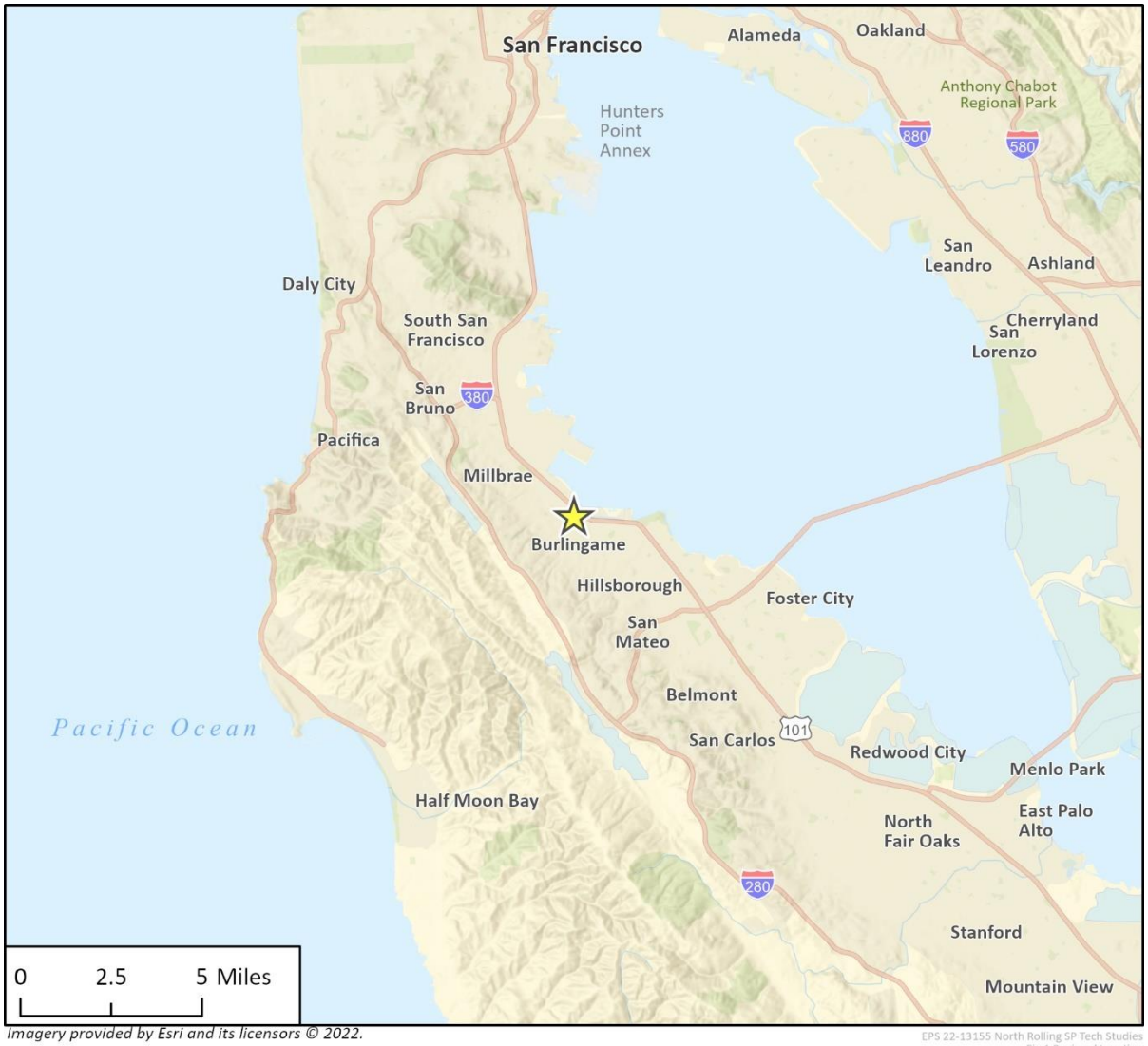
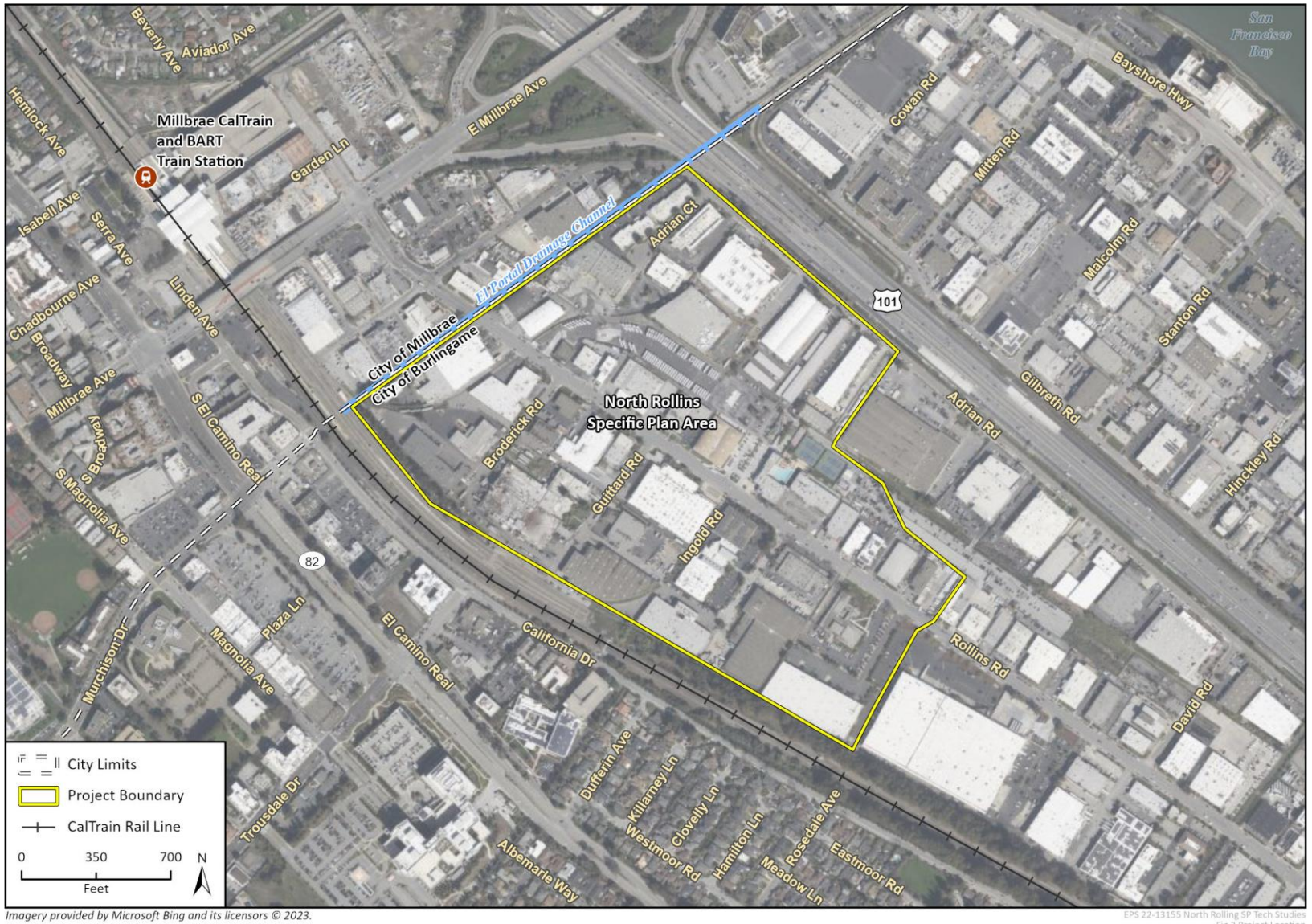


Figure 2 Project Location



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EPS 22-13155 North Rolling SP Tech Studies
Fig 2 Project Location

Project Description

The North Rollins Specific Plan area is designated as "Live/Work" in the "Envision Burlingame" 2040 General Plan (City of Burlingame 2019). The Specific Plan is consistent with the Live/Work designation and envisions converting the existing low-rise industrial area into a dynamic mixed-use, residential, commercial, and industrial neighborhood. The 2040 General Plan Environmental Impact Report (EIR) analyzed the maximum allowable development for the North Rollins Specific Plan (City of Burlingame 2018. Table 2 shows the new remaining intensity under the North Rollins Specific Plan, which includes 1,557 multi-family dwelling units, 591,217 square feet of industrial uses, 50,083 square feet of office uses, and 139,266 square feet of commercial uses.

Table 2 New Remaining Intensity under the North Rollins Specific Plan

Land Use Description	General Plan Maximum Allowed	Class 32 Exempt	Remaining Intensity	Recommended Adjustments	New Remaining Intensity
Multi-family (dwelling unit)	1,199	563	1,199	358	1,557
Industrial (square feet)	696,331	(114,449)	696,331	(105,114)	591,217
Office (square feet)	174,083	-	174,083	(124,000)	50,083
Commercial (square feet)	139,266	7,761	139,266	-	139,266

2 Background

2.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Human Perception of Sound

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Caltrans 2013).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud (10.5 times the sound energy) (Caltrans 2013).

Sound Propagation and Shielding

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in the noise level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions.

Sound levels are described as either a "sound power level" or a "sound pressure level," which are two distinct characteristics of sound. Both share the same unit of measurement, the dB. However, sound power (expressed as L_{pw}) is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave that exerts pressure on receivers, such as an eardrum or microphone, which is the sound pressure level. Sound measurement instruments only measure sound pressure, and noise level limits are typically expressed as sound pressure levels.

Noise levels from a point source (e.g., construction, industrial machinery, air conditioning units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features,

such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to noise as well. The FHWA's guidance indicates that modern building construction generally provides an exterior-to-interior noise level reduction of 10 dBA with open windows and an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows (FHWA 2011).

Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the equivalent noise level (L_{eq}), Day-Night Average Level (DNL; may also be symbolized as L_{dn}), and the community noise equivalent level (CNEL; may also be symbolized as L_{den}).

L_{eq} is one of the most frequently used noise metrics; it considers both duration and sound power level. The L_{eq} is defined as the single steady-state A-weighted sound level equal to the average sound energy over a time period. When no time period is specified, a 1-hour period is assumed. The L_{max} is the highest noise level within the sampling period, and the L_{min} is the lowest noise level within the measuring period. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL or L_{DEN}), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013).[1] The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of noise during the day, evening, and night; however noise levels described by L_{dn} and CNEL usually differ by 1 dBA or less. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range (FTA 2018).

2.2 Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent buildings or structures and vibration energy may propagate through the buildings or structures. Vibration may be felt, may manifest as an audible low-frequency rumbling noise (referred to as groundborne noise), and may cause windows, items on shelves, and pictures on walls to rattle. Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants at vibration-sensitive land uses and may cause structural damage.

[1] Because DNL and CNEL are typically used to assess human exposure to noise, the use of A-weighted sound pressure level (dBA) is implicit. Therefore, when expressing noise levels in terms of DNL or CNEL, the dBA unit is not included.

Typically, ground-borne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used as it corresponds to the stresses that are experienced by buildings (Caltrans 2020). Vibration velocity level can also be defined in vibration decibels (VdB).

High levels of groundborne vibration may cause damage to nearby building or structures; at lower levels, groundborne vibration may cause minor cosmetic (i.e., non-structural damage) such as cracks. These vibration levels are nearly exclusively associated with high impact activities such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation. Caltrans vibration building damage potential criteria are identified in Table 3.

Table 3 Caltrans Vibration Buidling Damage Criteria

	Maximum PPV (in/sec)	
Structural Integrity	**Transient**	**Continuous**
Extremely fragile buildings, ruins, monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Moden industrial and commercial structures	2.00	0.50

Source: Caltrans 2020

Numerous studies have been conducted to characterize the human response to vibration. The vibration annoyance potential criteria recommended for use by Caltrans, which are based on the general human response to different levels of groundborne vibration velocity levels, are described in Table 4.

Table 4 Caltrans Vibration Annoyance Potential Criteria

	Vibration Level (in/sec PPV)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources[1]**
Severe	2.0	0.4
Strongly perceptible	0.9	0.10
Distinctly perceptible	0.25	0.04
Barely perceptible	0.04	0.01

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

[1] Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020

2.3 Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise sensitive land uses (also referred to as “sensitive receivers”) include

residential, including single and multifamily dwellings, mobile home parks, and dormitories; transient lodging, including hotels, and motels; hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; and public or private educational facilities, libraries, churches, and places of public assembly.

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as schools, churches, and hospitals. Vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment).

The Specific Plan's existing uses contain commercial and industrial businesses. Noise-sensitive land uses such as multi-family residences are located approximately 800 feet northwest of the Specific Plan boundary and single-family residences are located 275 feet south of the Specific Plan boundary.

2.4 Project Noise Setting

The predominant source of noise in the Specific Plan area is motor vehicles. Motor vehicle noise is characterized by a high number of individual events that can create a sustained noise level in proximity to noise-sensitive uses. Roadways with the highest traffic volumes and speeds produce the highest noise levels. Rail noise (BART and Caltrain), airport noise associated with San Francisco International Airport (SFO) operations, and helicopter operations at Mills-Peninsula Medical Center are additional noise sources in the Specific Plan area. The roadways in the Specific Plan area with the highest traffic volumes and, thus, the highest noise levels would be US 101 and Rollins Road.

The southwestern runways (1R-19L and 1L-19R) of SFO are located approximately 0.33 miles northeast of the closest boundary of the Specific Plan. According to the Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport (City/County Association of Governments of San Mateo County [C/CAG] 2012), the 65 CNEL noise contour for the airport extends into the northeastern portion of the Specific Plan (approximately covering Adrian Court and the adjacent properties).

To characterize ambient sound levels at and near the project site, three long-term and two 15-short-term sound level measurements were conducted on December 6 and 7, 2022. Short-Term Noise Measurement 1 (ST-1) was taken on the western edge of the rail line, outside of the Specific Plan boundary, to capture a train pass-by. This measurement was taken outside of the plan boundary due to limited access at the western edges of the plan area. ST-2 was taken adjacent to Rollins Road. Table 5 summarizes the results of the short-term noise measurements. Noise measurement locations are shown in Figure 3.

Table 5 Project Site Vicinity Sound Level Monitoring Results - Short-Term

Measurement Location		Sample Times[1]	Approximate Distance to Primary Noise Source	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST-1	Parking area on western side of rail line (closest business of 1828 El Camino Real)	2:21 – 2:22 p.m.	Approximately 50 feet from rail line as train passed	74	53	83
ST-2	Adjacent to Rollins Road, near intersection of Ingold Road	1:12 – 1:27 p.m.	35 feet to centerline of Rollins Road	69	51	86

[1] Measurements occurred on December 7th, 2022.

L_{eq} = average noise level equivalent; dBA = A-weighted decibel; L_{min} = minimum instantaneous noise level; L_{max} = maximum instantaneous noise level

Detailed sound level measurement data are included in Appendix A.

Long-term Noise Measurement 1 (LT-1) was taken in between US 101 and Adrian Road to capture freeway noise. LT-2 was taken on Rollins Road, near the intersection with Ingold Avenue, to capture roadway noise on the main roadway through the Specific Plan area. LT-3 was taken adjacent to Broderick Road to capture the long-term noise exposure in the Specific Plan area from the rail line. Table 6 summarizes the results of the long-term noise measurements. Noise measurement locations are shown in Figure 3.

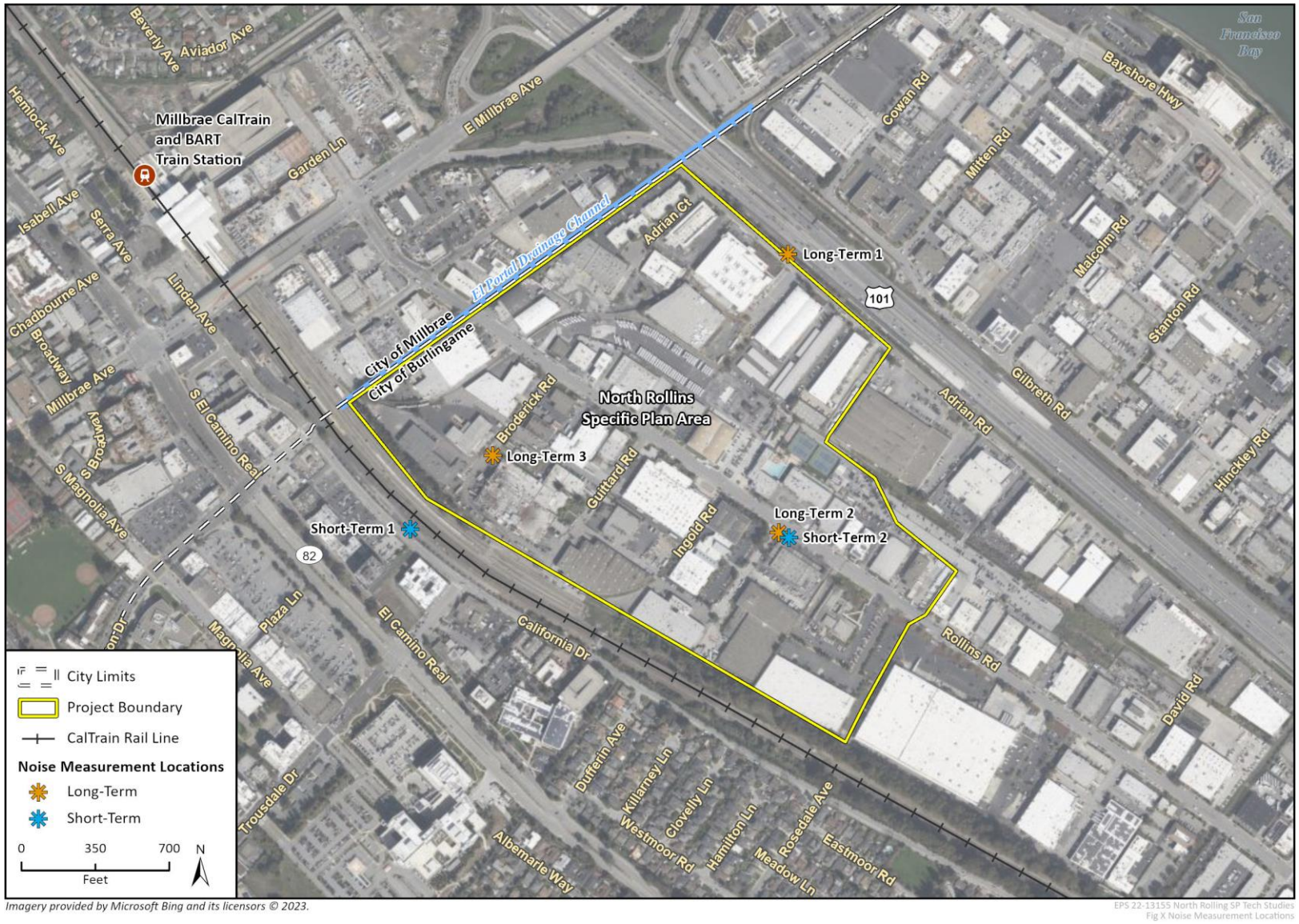
Table 6 Project Site Vicinity Noise Monitoring Results – Long Term

Measurement Location		Sample Times	Approximate Distance to Primary Noise Source	CNEL	L_{eq} (dBA)	L_{95} (dBA)	L_{max} (dBA)
LT-1	Between US 101 and Adrian Road	12:27 p.m., December 6 – 12:27 p.m., December 7	120 feet to centerline of US 101	79	73	61	97
LT-2	Adjacent to Rollins Road, near intersection of Ingold Road	12:54 p.m., December 6 – 12:54 p.m., December 7	35 feet to centerline of Rollins Road	67	62	49	96
LT-3	Adjacent to Broderick Road (near 10 Guittard Road)	1:40 p.m., December 6 – 1:40 p.m., December 7	450 feet east of rail line; 20 feet from centerline of Broderick Road	71	64	62	86

L_{eq} = average noise level equivalent; dBA = A-weighted decibel; L_{95} = sound level exceeded for 95 percent of the measurement period; L_{max} = maximum instantaneous noise level; CNEL = Community Noise Equivalent Level

Detailed sound level measurement data are included in Appendix A.

Figure 3 Noise Measurement Locations



Imagery provided by Microsoft Bing and its licensors © 2023.

EPS 22-13155 North Rolling SP Tech Studies
Fig X Noise Measurement Locations

2.5 Regulatory Setting

FTA Transit and Noise Vibration Impact Assessment Manual

The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual* (FTA 2018). For residential, commercial, and industrial uses, the daytime noise threshold is 80 dBA L_{eq}, 85 dBA L_{eq}, and 90 dBA L_{eq} for an 8-hour period, respectively.

Comprehensive Airport Land Use Plan

C/CAG acts as the Airport Land Use Commission (ALUC) and implements state-mandated airport planning processes, including the preparation of the Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport (C/CAG 2012). This plan is intended to protect the long-term viability of the airport by ensuring only compatible land uses are built in the vicinity of the airport, ensuring adoption of land use regulations which minimize exposure of people to hazards associated with airport operations, and providing a set of policies and criteria to assist the ALUC in evaluating the compatibility of proposed actions of local agencies with present and future operations at the Airport. Section 4 of the Plan identifies airport/land use compatibility policies for the airport, including noise compatibility policies that set 65, 70, and 75 CNEL noise compatibility zones and compatibility criteria for these different zones.

City of Burlingame 2040 General Plan

The Burlingame 2040 General Plan Community Safety Element includes goals and policies to guide development and to protect citizens from the harmful and irritating effects of excessive noise. The Noise Element establishes noise/land use compatibility categories for new uses, which are summarized in Table 7. For residential uses, the City considers noise levels up to 70 CNEL to be conditionally acceptable.

Table 7 Land Use Noise Criteria

Land Use Categories	Community Noise Exposure L_{dn} or CNEL, dBA						
	50	55	60	65	70	75	80+
Residential - Low Density Single Family, Duplex, Mobile Home	1	2	2	2	3	4	4
Residential - Multi Family	1	1	2	2	3	4	4
Transient Lodging - Motels, Hotels	1	1	2	2	3	3	4
Schools, Libraries, Churches, Hospitals, Nursing Homes	1	1	2	2	3	3	4
Auditoriums, Concert Halls, Amphitheaters	2	2	2	4	4	4	4
Sports Arena, Outdoor Spectator Sports	2	2	2	2	4	4	4
Playgrounds, Neighborhood Parks	1	1	1	1	3	3	4
Golf Courses, Riding Stables, Water Recreation, Cemeteries	1	1	1	1	3	3	3
Office Buildings, Business Commercial, Retail Commercial and Professional	1	1	1	2	2	3	3
Industrial, Manufacturing, Utilities, Agriculture	1	1	1	1	2	3	3

Legend:

1. NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
2. CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and Schools, Libraries, Churches, Hospitals, Nursing Homes 1 needed noise insulation features included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.
3. NORMALLY UNACCEPTABLE: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
4. CLEARLY UNACCEPTABLE: New construction or development should generally not be undertaken.

Source: City of Burlingame 2040 General Plan, Figure CS-2

The City 2040 General Plan Community Safety Element includes Goal CS-4, the purpose of which is to protect residents and visitors to Burlingame from excessive noise and disruptive ground vibration. This would be accomplished through the following policies:

- **CS-4.1: Locating Noise-sensitive Uses.** Locate noise-sensitive uses such as homes, schools, hospitals, libraries, religious institutions, and convalescent homes away from major sources of noise.
- **CS-4.2: Residential Noise Standards.** Require the design of new residential development to comply with the following noise standards:
  - The maximum acceptable interior noise level for all new residential units (single-family, duplex, mobile home, multi-family, and mixed-use units) shall be an L_{dn} of 45 dBA with windows closed.
  - For project locations that are primarily exposed to noise from aircraft, Caltrain, BART, US 101, and Interstate 280 operations, the maximum instantaneous noise level in bedrooms shall not exceed 50 dBA at night (10:00 P.M. to 7:00 A.M.), and the maximum instantaneous noise level in all interior rooms shall not exceed 55 dBA during the day (7:00 A.M. to 10:00 P.M.) with windows closed.
- **CS-4.3: Office Noise Level Standards.** Require the design of new office developments and similar uses to achieve a maximum interior noise standard of 45 dBA L_{eq} (peak hour).

- **CS-4.4: Motel, Hotel, Nursing Home and Hospital Noise Standards.** Require the design of new motels, hotels, nursing homes, hospitals, and other similar uses to comply with the following noise standards:
  - The maximum acceptable interior noise level for sleeping areas shall be an Ldn of 45 dBA with windows closed.
- **CS-4.5: Noise Mitigation and Urban Design.** Consider the visual impact of noise mitigation measures; require solutions that do not conflict with urban design goals and policies included in the General Plan.
- **CS-4.6: Freeway Sound Walls.** Coordinate with Caltrans to ensure new sound walls and landscaping strips are attractive along State Route 101 to protect adjacent areas from excessive freeway noise in conjunction with any new freeway project.
- **CS-4.7: Airport and Heliport Noise.** Monitor noise impacts from aircraft operations at San Francisco International Airport and Mills-Peninsula Medical Center and implement applicable noise abatement policies and procedures as outlined in the Airport Noise Ordinance and Airport Land Use Compatibility Plan.
- **CS-4.8: Airport Noise Evaluation and Mitigation.** Require project applicants to evaluate potential airport noise impacts if the project is located within the 60 CNEL contour line of San Francisco International Airport (as mapped in the Airport Land Use Compatibility Plan). All projects shall be required to mitigate impacts to comply with the interior and exterior noise standards established by the Airport Land Use Compatibility Plan. Any action that would either permit or result in the development or construction of a land use considered to be conditionally compatible with aircraft noise of CNEL 65 dB or greater (as mapped in the Airport Land Use Compatibility Plan) shall include the grant of an avigation easement to the City and County of San Francisco prior to issuance of a building permit(s) for any proposed buildings or structures, consistent with Airport Land Use Compatibility Plan Policy NP3 Grant of Avigation Easement.
- **CS-4.9: Airport Disclosure Notices.** Require that all new development comply with real estate disclosure requirements of State law. Section 11010 of the Business and Professions Code requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within two miles of the property (Cal. Bus. and Prof. Code Section 110010(b)(13).
- **CS-4.10: Construction Noise Study.** Require development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on those uses consistent with Municipal Code provisions.
- **CS-4.11: Train Noise.** Require that all new development within 1,000 feet of the rail line provide deed notices disclosing noise impacts upon transfer of title to residents and property owners.
- **CS-4.12: Quiet Zones for Trains.** Coordinate with applicable railroad authorities to study options for reducing railroad noise impacts, including feasibility of Quiet Zone technology where appropriate.
- **CS-4.13: Vibration Impact Assessment.** Require a vibration impact assessment for proposed projects in which heavy-duty construction equipment would be used (e.g., pile driving, bulldozing) within 200 feet of an existing structure or sensitive receptor. If applicable, require all feasible mitigation measures to be implemented to ensure that no damage or disturbance to structures or sensitive receptors would occur.

Burlingame Municipal Code

Burlingame Municipal Code (BMC) Section 18.07.110 states that allowable hours of construction in the City are between 8:00 a.m. and 7:00 p.m. on weekdays and 9:00 a.m. and 6:00 p.m. on Saturdays. Construction is not permitted on Sundays and holidays. An exception may be granted under circumstances of urgent necessity in the interest of public health and safety. An exception must be approved in writing by the building official and shall be granted for a period of no more than three days for projects including structures with a gross floor area of less than 40,000 square feet; and, when reasonable to accomplish the erection, demolition, alteration, or repair, the exception shall not exceed 20 days for projects including structures with a gross floor area of 40,000 square feet or greater.

BMC Section 10.40.020 prohibits the use of mechanical devices, machines, apparatuses, or instruments for the intensification or amplification of the human voice or any sound or noise in such a manner that the peace and good order of the neighborhood are disturbed or that persons owning, using or occupying the property in the neighborhood are disturbed or annoyed. BMC Section 10.40.035 prohibits the creation of any loud, unnecessary, or unusual noise that disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. BMC Section 10.40.037 prohibits the operation of any lawnmower, lawn edge, riding tractor, or any other mechanical or electrical machinery that creates a loud, raucous, or impulsive sound within any residential district except between the hours of 8:00 a.m. and 7:00 p.m. on Monday through Saturday and between 10:00 a.m. and 6:00 p.m. on Sunday and holidays. In addition, BMC Section 10.40.038 contains noise restrictions on leaf blowers, including allowable hours of use, allowable areas of use, and noise level specifications.

3 Methodology

3.1 Construction Noise

This section estimates construction noise from Specific Plan development based on reference noise levels for various pieces of construction equipment reported by the FTA's *Noise and Vibration Impact Assessment*. Construction equipment may operate as close as 10 feet from nearby noise-sensitive receivers; however, over the course of a normal construction day, the equipment would typically move back and forth across a construction site and average a further distance from noise-sensitive receptors. For analysis purposes, a distance of 25 feet was used to demonstrate typical construction noise levels. Construction noise estimates do not account for the presence of intervening structures or topography, which could reduce noise levels at receiver locations.

3.2 Stationary On-Site Operational Noise

Stationary noise (i.e., on-site operational noise) were analyzed in context of typical mechanical equipment such as heating, ventilation, and air conditioning (HVAC) units.

3.3 Mobile Off-site Operational (Traffic) Noise

Traffic modeling results from the 2040 General Plan EIR for roadways within the Specific Plan area were used to analyze the project's traffic noise levels, with consideration of the change in land uses from the Specific Plan.

3.4 Groundborne Vibration

Development facilitated by the Specific Plan would not include substantial vibration sources associated with operation. Construction activities have the greatest potential to generate groundborne vibration affecting nearby sensitive receivers. Construction vibration estimates are based off Caltrans and FTA reference data.

3.5 Aviation Noise

The airport noise contours for SFO with respect to the Specific Plan area were utilized to determine potential impacts from exposure to aviation-related noise.

3.6 Noise Land Use Compatibility

To determine the land use combability with noise standards from the City 2040 General Plan, the future (2040) transportation noise contours in Figure 15-3 from the 2040 General Plan EIR were used. These contours include noise from US 101, Rollins Road, and rail noise.

3.7 Significance Thresholds

To determine whether a project would have a significant noise impact, Appendix G of the California Environmental Quality Act (CEQA) Guidelines requires consideration of whether a project would result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
2. Generation of excessive groundborne vibration or groundborne noise levels
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels
4. Would the project be subjected to noise levels in excess of the City's land use compatibility guidelines for noise?

Construction Noise

FTA criteria for construction noise levels are used in this analysis. A plan or project would result in the generation of a substantial temporary increase in ambient noise levels if construction noise would exceed the FTA daytime criteria of 80 dBA Leq, 85 dBA Leq, and 90 dBA Leq for an 8-hour period for residential, commercial, and industrial land uses, respectively.

On-site Operational Noise

Operational noise impacts are evaluated against BMC noise limits and 2040 General Plan policies.

Off-site Traffic Noise

Off-site project noise (i.e., roadway noise) would result in a significant impact if the project would cause the ambient noise level measured at the property line of affected uses to increase by 3 dBA, which would be a perceptible increase in traffic noise.

Construction Vibration

The City has not adopted a significance threshold to assess vibration impacts. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual* (2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Based on the Caltrans criteria described above, construction vibration impacts would be significant if vibration levels exceed 0.5 in./sec. PPV for residential structures and 2.0 in./sec. PPV for commercial structures, which are the limits where minor cosmetic, i.e., non-structural, damage may occur to these buildings. In addition, construction vibration impacts would cause human annoyance at nearby receivers if vibration levels exceed 0.25 in./sec. PPV, which is the limit where vibration becomes distinctly perceptible from barely perceptible.

Exposure to Aircraft Noise:

For a plan or project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if

the plan or project exposes people residing or working in the project area to excessive noise levels such as noise levels exceeding normally acceptable noise levels in the 2040 General Plan.

Land Use Compatibility

The 2040 General Plan provides exterior noise limits for noise compatibility in Table 7. In addition, the interior noise limit for residential units is 45 dBA Ldn. These limits are used to determine impacts for future development facilitated by the 2040 General Plan.

3.8 Findings of the Burlingame 2040 General Plan EIR

The 2040 General Plan EIR found that the 2040 General Plan would result in a potentially significant impact from construction noise, which would be mitigated through Mitigation measure 15-1 to less than significant through an expanded General Plan Policy CS-4.10 to implement Construction Noise Studies. The 2040 General Plan EIR determined that construction vibration impacts would be less than significant.

The 2040 General Plan EIR determined that increases in traffic noise levels would result in a potentially significant impact since roadway noise levels would increase by more than 3 dBA on certain roadways (which were outside of the Specific Plan area), and that no feasible mitigation existed to reduce these noise levels. In addition, it found that noise levels to future sensitive receivers could be significant and unavoidable. The 2040 General Plan EIR also determined that airport noise would result in a less than significant impact.

The 2040 General Plan EIR found that impacts from operational noise, such as mechanical equipment and leaf blower noise, would result in less than significant impacts through implementation of General Plan policies.

4 Impact Analysis

4.1 Issue 1

Issue:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

Noise from individual construction projects facilitated by the project would temporarily increase noise levels at nearby sensitive receivers. Since at this stage of planning project-level, details are not available for future projects that would be carried out under the project, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects, or construction noise at adjacent properties. However, noise estimates for typical construction activities have been provided below.

Construction activities would generate noise from phases such as demolition, site preparation, grading, building construction, and paving activities. Each phase of construction has a specific equipment mix and associated noise characteristics, depending on the equipment used during that phase. Construction noise would typically be higher during the more equipment-intensive phases of initial construction (i.e., demolition, site preparation, and grading work) and would be lower during the later construction phases (i.e., building construction and paving). Table 8 illustrates typical noise levels associated with construction equipment at a distance of 25 feet.

Table 8 Typical Noise Levels for Construction Equipment

	Estimated Noise Levels at Nearest Sensitive Receivers dBA L_{eq})		
Equipment	**25 feet**	**50 feet**	**100 feet**
Air Compressor	86	80	74
Backhoe	86	80	74
Concrete Mixer	91	85	79
Dozer	91	85	79
Grader	91	85	79
Jack Hammer	94	88	82
Loader	86	80	74
Paver	91	85	79
Pile-drive (Impact)	107	101	95
Pile-driver (Sonic)	101	95	89
Roller	91	85	79
Saw	82	76	70
Scarified	89	83	77
Scraper	91	85	79
Truck	90	84	78

Source: FTA 2018

Neither the BMC nor the City 2040 General Plan contain quantitative limits for construction noise. In lieu of City-specific standards, the FTA criteria for assessing construction noise impacts are used. For residential, commercial, and industrial uses, the FTA daytime noise threshold is 80 dBA L_{eq}, 85 dBA L_{eq}, and 90 dBA L_{eq} for an 8-hour period, respectively.

Noise would typically drop off at a rate of about 6 dBA per doubling of distance. Therefore, noise levels are about 6 dBA lower than shown in Table 8 at 50 feet from the noise source and 12 dBA lower at a distance of 100 feet from the noise source. As shown in these noise levels, construction noise may exceed the FTA's daytime noise limits, depending on the equipment used and the distance in which the equipment is operating compared to noise-sensitive receptors. Therefore, impacts would be potentially significant.

Operation

Stationary (On-site Operational) Noise

Stationary and other sources of noise in Burlingame include those associated with the standard operation of land uses. These sources could include, but are not limited to, landscape and building maintenance activities, stationary mechanical equipment (e.g., pumps, generators, HVAC units), garbage collection activities, commercial and industrial activities, and other stationary and area sources such as people's voices, amplified music, and public address systems.

Noise generated by residential or commercial uses are generally short-term and intermittent in nature. Industrial uses may generate noise on a more continual basis due to the nature of their activities. The proposed Specific Plan adjustments would provide for increase in residential development with the Specific Plan area through the removal of potential office uses. Residential

development tends to have lower noise levels associated than other proposed uses, such as industrial or commercial uses.

- **CS-4.2: Residential Noise Standards.** Require the design of new residential development to comply with the following noise standards:
  - The maximum acceptable interior noise level for all new residential units (single-family, duplex, mobile home, multi-family, and mixed-use units) shall be an L_{dn} of 45 dBA with windows closed.
  - For project locations that are primarily exposed to noise from aircraft, Caltrain, BART, US 101, and Interstate 280 operations, the maximum instantaneous noise level in bedrooms shall not exceed 50 dBA at night (10:00 P.M. to 7:00 A.M.), and the maximum instantaneous noise level in all interior rooms shall not exceed 55 dBA during the day (7:00 A.M. to 10:00 P.M.) with windows closed.

In addition, the BMC limits noise from certain common stationary and other sources such as speakers (Section 10.40.020), lawnmowers (Section 10.40.037), leaf blowers (Section 10.40.038), loading and unloading activities (Section 10.40.039), and mechanical equipment including HVAC and generators (Section 25.58.050).

2040 General Plan Policy CS-4.2 would protect residents from excessive noise by requiring the City to review the location of new noise-sensitive land uses, locate such land uses away from major noise sources, and ensure new land uses meet the City's noise standards through evaluation and design considerations. In addition, stationary and other sources of noise would be controlled by the City's Municipal Code, which provide requirements for certain non-transportation noise sources. Therefore, future stationary noise sources would comply with City standards and would not expose people to excessive noise levels. This would be a less-than-significant impact, and the project would not result in new or substantially more significant impacts regarding on-site or off-site construction noise than those identified in the 2040 General Plan EIR.

Mobile (Off-Site Operational) Noise

The implementation of the Specific Plan would have the potential to change the existing amounts and types of land uses within the City. These potential land use changes would increase residents and employees within the City. This increase in population and employment would lead to increased vehicle traffic on the local roadway system, which would result in an increase in traffic-related noise levels. The 2040 General Plan EIR analyzed traffic noise increases from implementation of the 2040 General Plan, with the only roadway analyzed through the Specific Plan area being Rollins Road, as shown in Table 9.

Table 9 2040 General Plan Traffic Noise Level Increases for Roadways in Specific Plan Area

			Existing		Future		Net Change	
ID	Road	Segment	ADT	CNEL	ADT	CNEL	ADT	CNEL
9	Rollins Road	Broadway to North City Limit	7,456	64.0	8,203	65.2	746	1.2

Source: City of Burlingame 2018

As shown in Table 9, the 2040 General Plan would increase traffic on Rollins Road by 1.2 CNEL from the addition of 746 ADT, which would be below a barely perceptible increase of 3 dBA. For a 3 dBA increase to occur, traffic would need to be increased by 100 percent, or 7,456 additional ADT. According to the air quality modeling outputs conducted by the project's Air Quality and Greenhouse Gas Emissions Technical Report (Rincon 2023), the change in uses for the Specific Plan area between what was approved under the 2040 General Plan and what is proposed (removal of some office uses and addition of multi-family), the project would result in an increase of 384 trips. This minor increase would increase noise levels by an additional several tenths on Rollins Road but would not increase noise traffic noise levels to where they exceed a 3 dBA increase. Therefore, traffic noise level increases from the project would be less than significant. The project would not result in new or substantially more significant impacts regarding off-site traffic noise than those identified in the 2040 General Plan EIR.

Mitigation Measures

Implementation of 2040 General Plan Policy CS-4.10, as expanded upon in Mitigation Measure 15-1 in the 2040 General Plan EIR, would reduce construction noise and associated impacts:

Mitigation Measure NOI-1 Construction Noise Study

All development projects shall be subject to the applicable construction hour limitations established by the City's Municipal Code. Development projects that are subject to discretionary review and that are located near noise-sensitive land uses shall assess potential construction noise levels and minimize substantial adverse impacts by implementing feasible construction noise control measures that reduce construction noise levels at sensitive receptor locations. Such measures may include, but are not limited to:

- Construction management techniques (e.g., siting staging areas away from noise-sensitive land uses, phasing activities to take advantage of shielding/attenuation provided by topographic features or buildings, monitoring construction noise);
- Construction equipment controls (e.g., ensuring equipment has mufflers, use of electric hook-ups instead of generators);
- Use of temporary sound barriers (equipment enclosures, berms, walls, blankets, or other devices) when necessary; and
- Monitoring of actual construction noise levels to verify the need for noise controls.

Significance After Mitigation

Although specific construction activities and noise levels associated with future development projects are not known at this time, implementation of Mitigation Measure NOI-1 would require feasible construction noise control measures when development occurs near noise-sensitive land uses and would render potential construction noise impacts from future development projects a less than significant impact with mitigation. With mitigation, the project would not result in new or substantially more significant impacts regarding construction noise than those identified in the 2040 General Plan EIR.

4.2 Issue 2

Issue: Would the project result in generation of excessive groundborne vibration or ground-borne noise levels?

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and activities involved. Vibration generated by construction equipment spreads through the ground and diminishes with increases in distance. The effects of ground vibration may be imperceptible at the lowest levels, result in low rumbling sounds and detectable vibrations at moderate levels, and high levels of vibration can cause sleep disturbance in places where people normally sleep or annoyance in buildings that are primarily used for daytime functions and sleeping. Ground vibration can also potentially damage the foundations and exteriors of existing structures even if it does not result in a negative human response. Pile drivers and other pieces of high impact construction equipment are generally the primary cause of construction-related vibration impacts. The use of such equipment is generally limited to sites where there are extensive layers of very hard materials (e.g., compacted soils, bedrock) that must be loosened and/or penetrated to achieve grading and foundation design requirements. The need for such methods is usually determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with foundation design recommendations and the construction methods needed to safely permit development of a site.

Construction equipment and activities are categorized by the nature of the vibration it produces. Equipment or activities typical of continuous vibration include excavation equipment, static compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of transient (single-impact) or low-rate repeated impact vibration include impact pile drivers, and crack-and-seat equipment. Pile driving and blasting activities produce the highest levels of ground vibration and can result in structural damage to existing buildings. Since project specific information is not available at this time, potential short-term construction-related vibration impacts can only be evaluated based on the typical construction activities associated with the development. Future development as a result of the proposed Specific Plan would occur in primarily urban settings where land is already disturbed and, therefore, are not likely to require blasting, which is typically used to remove unwanted rock or earth; however, it is possible that pile driving could occur during building construction under the proposed Specific Plan. Standard construction equipment (e.g., bulldozers, trucks, jackhammers, etc.) generally do not cause vibration that could cause structural or cosmetic damage but may be felt by nearby receivers. Table 10 presents the typical types of equipment that could be used for Specific Plan development.

Table 10 Vibration Source Levels for Construction Equipment

Equipment		Approximate Vibration Level (in/sec PPV)			Approximate Vibration Level (VdB)		
		25 feet	50 feet	100 feet	25 feet	50 feet	100 feet
Small Bulldozer		0.003	0.001	0.0007	58	49	40
Jackhammer		0.035	0.016	0.008	79	70	61
Rock Breaker		0.059	0.028	0.013	83	74	65
Loaded Truck		0.076	0.036	0.017	86	77	68
Auger Drill Rig		0.089	0.042	0.019	87	78	69
Large Bulldozer		0.089	0.042	0.019	87	78	69
Vibratory Roller		0.210	0.098	0.046	94	85	76
Pile Driver (impact)	Upper range	1.519	0.709	0.331	112	103	94
	Typical	0.644	0.300	0.140	104	95	86
Pile Driver (sonic)	Upper range	0.734	0.342	0.160	105	96	87
	Typical	0.170	0.079	0.037	93	84	75

Source: FTA 2018

As shown in Table 10, specific vibration levels associated with typical construction equipment are highly dependent on the type of equipment used. Vibration levels dissipate rapidly with distance, such that even maximum impact pile driving activities would result in vibration levels below Caltrans' recommended 0.5 PPV threshold for transient vibration-induced damage in historic, older buildings at a distance 100 feet; all other activities would be below Caltrans' 0.25 PPV threshold for continuous vibration-induced damage in historic, older buildings at a distance of 100 feet. For human responses, maximum impact pile driving activities would result in groundborne vibration and noise levels below Caltrans' threshold for a distinctly perceptible response (0.24 PPV in/sec) and the FTA's vibration standard for infrequent events at residential lands (80 VdB) at a distance of approximately 150 feet and 300 feet, respectively; other activities may be barely to distinctly perceptible when occurring within approximately 150 feet of sensitive land uses. Most construction equipment does not operate in the same location for prolonged periods of time. Therefore, even if construction equipment were to operate near a building where receptors may feel vibration, it would only be for a temporary amount of time. Nonetheless, depending on the specific equipment in use and proximity of the equipment to vibration sensitive land uses, vibration levels may exceed accepted levels at which building damage may occur or which may be perceived by sensitive receptors as excessive. Although project-specific construction activities and noise levels associated with future development projects are not known at this time, proposed 2040 General Plan Policy CS-4.13 requires an assessment of potential impacts and the application of vibration control measures to avoid damage to structures and disturbance of sensitive receptors. The implementation of this policy would render potential construction vibration impacts from future development projects under the Specific Plan to a less than significant impact, and the project would not result in new or substantially more significant impacts regarding construction vibration than those identified in the 2040 General Plan EIR.

- **CS-4.13: Vibration Impact Assessment.** Require a vibration impact assessment for proposed projects in which heavy-duty construction equipment would be used (e.g., pile driving, bulldozing) within 200 feet of an existing structure or sensitive receptor. If applicable, require all

feasible mitigation measures to be implemented to ensure that no damage or disturbance to structures or sensitive receptors would occur.

Residential, commercial, and industrial land uses facilitated by the Specific Plan would not involve substantial vibration sources associated with operation. Therefore, Specific Plan operational vibration impacts would be less than significant, and the project would not result in new or substantially more significant impacts regarding operational vibration than those identified in the 2040 General Plan EIR.

4.3 Issue 3

Issue:	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

A significant impact would occur if a plan or project would expose people residing or working in the project area to excessive noise levels for a plan or project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

The southwestern runway of SFO is located approximately 0.33 miles northeast of the closest boundary of the Specific Plan. According to the Comprehensive Airport Land Use Plan for the Environs of San Francisco International Airport (C/CAG 2012), the 65 CNEL noise contour for the airport extends into the northeastern portion of the Specific Plan (approximately covering Adrian Court and the adjacent properties). Noise-sensitive receivers further west into the Specific Plan area may be exposed to elevated noise levels from the airport, however they would not be exposed to airport noise levels 65 CNEL or above. SFO does not provide noise contours for 60 CNEL to 65 CNEL, but it is assumed that the 60 CNEL contour would extend further into the city, covering more areas that contain noise-sensitive receivers. In addition, helicopter operations at Mills-Peninsula Medical Center generates noise that impacts existing residential and commercial land uses surrounding the hospital. The center is located approximately 0.1 miles south of the nearest Specific Plan boundary.

As the City of Burlingame's normally acceptable noise levels are 55 to 60 CNEL for residential, hotels, motels, schools, libraries, churches, hospitals, and nursing homes, this would mean that noise-sensitive receivers in Burlingame would be exposed to conditionally acceptable noise levels from SFO and the heliport. In addition, the Airport Land Use Plan establishes noise abatement and mitigation procedures for housing units in 65 CNEL zones, which the northeastern portion of the Specific Plan is exposed to. However, implementation of the following policies in the 2040 General Plan would reduce the exposure of sensitive receivers to aircraft noise:

- **CS-4.7: Airport and Heliport Noise.** Monitor noise impacts from aircraft operations at San Francisco International Airport and Mills-Peninsula Medical Center and implement applicable noise abatement policies and procedures as outlined in the Airport Noise Ordinance and Airport Land Use Compatibility Plan.
- **CS-4.8: Airport Noise Evaluation and Mitigation.** Require project applicants to evaluate potential airport noise impacts if the project is located within the 60 CNEL contour line of San Francisco International Airport (as mapped in the Airport Land Use Compatibility Plan). All projects shall be required to mitigate impacts to comply with the interior and exterior noise

standards established by the Airport Land Use Compatibility Plan. Any action that would either permit or result in the development or construction of a land use considered to be conditionally compatible with aircraft noise of CNEL 65 or greater (as mapped in the Airport Land Use Compatibility Plan) shall include the grant of an avigation easement to the City and County of San Francisco prior to issuance of a building permit(s) for any proposed buildings or structures, consistent with Airport Land Use Compatibility Plan Policy NP3 Grant of Avigation Easement.

- **CS-4.9: Airport Disclosure Notices.** Require that all new development comply with real estate disclosure requirements of State law. Section 11010 of the Business and Professions Code requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within two miles of the property (Cal. Bus. and Prof. Code Section 110010(b)(13).

Implementation of 2040 General Plan CS-4.8 would ensure that development within the 60 CNEL airport noise contours would be designed to comply with the applicable interior and exterior noise standards. In addition, avigation easements would be obtained for projects within the 65 CNEL airport noise contour, and through CS-4.9 airport disclosure notices would be submitted. Therefore, with compliance with these 2040 General Plan policies, no substantial noise exposure from airport noise would occur to construction workers, users, or employees of the project, and impacts would be less than significant. The project would not result in new or substantially more significant impacts regarding airport and heliport noise than those identified in the 2040 General Plan EIR.

4.4 Issue 4

Issue:	Would the project be subjected to noise levels in excess of the City's land use compatibility guidelines for noise?

The implementation of the Specific Plan would have the potential to change the existing amounts and types of land uses within the City, such as placing more residential uses than previously planned than in the 2040 General Plan. These residential receivers would be exposed to transportation noise from roadways, rail, and aircraft, and may be exposed to noise levels that exceed the City's land use compatibility guidelines for noise. These standards are shown in Table 7.

As part of the 2040 General Plan EIR, future (2040) noise contours from roadway and rail noise sources were modeled and presented in Figure 15-3 and included in Appendix B of this document. As shown in the figure, nearly the entire Specific Plan area is within at least the 70 CNEL noise contour, with the majority of the area east of Rollins Road within the 75 CNEL noise contour, and a small sliver within the 65 CNEL noise contour near the rail line. This noise is dominated by traffic on US 101. Rollins Road and the rail line are small contributors to these noise levels. It should be noted that these calculations do not account for topography or shielding from existing buildings, which would result in lower noise levels as the noise travels farther from US 101. The measured noise levels shown in Table 6 generally align with the contour predictions, with a noise level of 79 CNEL adjacent to the US 101; a noise level of 67 CNEL adjacent to Rollins Road; and a noise level of 71 CNEL off Broderick Road. Therefore, there would be the potential for noise levels at future residential development as part of the Specific Plan's changes from the 2040 General Plan to be exposed to noise levels that exceed the City's compatibility guidelines. The 2040 General Plan includes several policies to reduce noise levels at new proposed uses as shown in the following policies:

- **CS-4.1: Locating Noise-sensitive Uses.** Locate noise-sensitive uses such as homes, schools, hospitals, libraries, religious institutions, and convalescent homes away from major sources of noise.
- **CS-4.2: Residential Noise Standards.** Require the design of new residential development to comply with the following noise standards:
  - The maximum acceptable interior noise level for all new residential units (single-family, duplex, mobile home, multi-family, and mixed-use units) shall be an L_{dn} of 45 dBA with windows closed.
  - For project locations that are primarily exposed to noise from aircraft, Caltrain, BART, US 101, and Interstate 280 operations, the maximum instantaneous noise level in bedrooms shall not exceed 50 dBA at night (10:00 P.M. to 7:00 A.M.), and the maximum instantaneous noise level in all interior rooms shall not exceed 55 dBA during the day (7:00 A.M. to 10:00 P.M.) with windows closed.
- **CS-4.3: Office Noise Level Standards.** Require the design of new office developments and similar uses to achieve a maximum interior noise standard of 45 dBA L_{eq} (peak hour).
- **CS-4.4: Motel, Hotel, Nursing Home and Hospital Noise Standards.** Require the design of new motels, hotels, nursing homes, hospitals, and other similar uses to comply with the following noise standards:
  - The maximum acceptable interior noise level for sleeping areas shall be an L_{dn} of 45 dBA with windows closed.
- **CS-4.5: Noise Mitigation and Urban Design.** Consider the visual impact of noise mitigation measures; require solutions that do not conflict with urban design goals and policies included in the General Plan.
- **CS-4.6: Freeway Sound Walls.** Coordinate with Caltrans to ensure new sound walls and landscaping strips are attractive along State Route 101 to protect adjacent areas from excessive freeway noise in conjunction with any new freeway project.
- **CS-4.11: Train Noise.** Require that all new development within 1,000 feet of the rail line provide deed notices disclosing noise impacts upon transfer of title to residents and property owners.
- **CS-4.12: Quiet Zones for Trains.** Coordinate with applicable railroad authorities to study options for reducing railroad noise impacts, including feasibility of Quiet Zone technology where appropriate.

General Plan Policies CS-4.1 to 4.6 establish the overall goal and intent of the City to protect residents from excessive noise by requiring the City to review the location of new noise-sensitive land uses, locate such land uses away from major noise sources, and ensure new land uses meet the City's noise standards through evaluation and design considerations. In addition, General Plan Policies CS-4.11 and 4.12 would have the effect of reducing exposure to rail noise. The application of the policies and objectives outlined in the 2040 General Plan would reduce the amount of future vehicle trips generated from implementation of the General Plan; however, the potential level of reduction is uncertain at this time and would be contingent on the characteristic of each individual future development project. Since future noise levels would potentially expose noise-sensitive land uses to conditionally acceptable or higher noise levels, similar to the findings of the 2040 General Plan EIR, no additional feasible mitigation is available, and this impact would remain significant and unavoidable.

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Urban Crossroads. 2022. North Rollins Specific Plan Preliminary Vehicle Miles Traveled (VMT) Screening Evaluation. October 21.

Appendix A

Noise Measurement Data

Appendix B

City of Burlingame 2040 General Plan EIR Future Noise Contours

Appendix C

Vehicle Miles Traveled Screening Analysis

MEMORANDUM

URBAN CROSSROADS

DATE: October 21, 2022
TO: John Moreland, Rincon Consultants, Inc
FROM: Alex So, Urban Crossroads
JOB NO: 15061-01 VMT

NORTH ROLLINS SPECIFIC PLAN PRELIMINARY VEHICLE MILES TRAVELED (VMT) SCREENING EVALUATION

John Moreland,

Urban Crossroads, Inc. is pleased to provide the following Preliminary Vehicle Miles Traveled (VMT) Screening Evaluation for the North Rollins Specific Plan (**Project**), located in between US Route 101 and State Route 82 (El Camino Real) along the northern border of the City of Burlingame.

PROJECT OVERVIEW

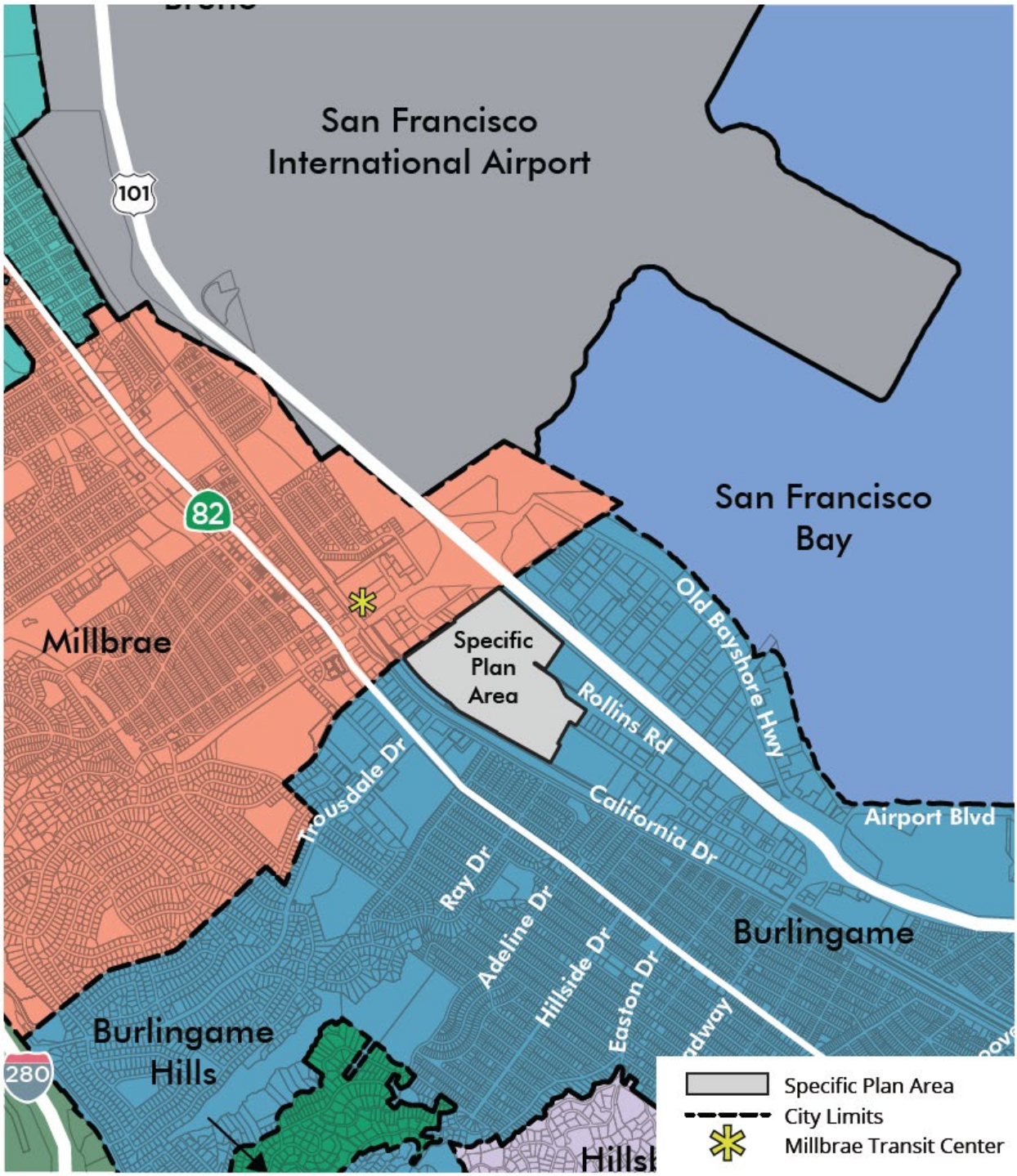
The proposed Project consists of modifying the allowed intensity within the General Plan by removing a portion of the allowed office and industrial intensity and converting it into multi-family units. The specific numbers are reducing the allowed intensity of office use from 174,083 square feet to 50,083 square feet, reducing the allowed intensity of industrial use from 696,331 square feet to 591,217 square feet, and increasing the allowed residential intensity from 1,199 multifamily units to 1,557 multifamily units. These changes result in a net increase of 358 multifamily units from the allowable multifamily residential units within the Specific Plan in conjunction with reductions of 105,114 square feet of industrial use and 124,000 square feet of office use.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**) (1). The City of Burlingame adopted analytical procedures, screening tools, and impact thresholds for VMT, which are documented in the Contra Costa County Transportation Analysis Guidelines (June 2020) (**County Guidelines**) (2). The VMT

analysis presented in this report has been developed based on the adopted County Guidelines.

EXHIBIT 1: PROJECT'S PROPOSED SPECIFIC PLAN



VMT SCREENING

The County Guidelines provides details on appropriate screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed project level analysis. To aid in the project-level VMT screening process, the Contra Costa County utilizes the Contra Costa Association of Governments (C/CAG) VMT Screening Tool (Screening Tool). The web-based Screening Tool allows a user to select an assessor's parcel number (APN) to determine if a project's physical location meets one or more of the land use screening thresholds documented in the County Guidelines. The Screening criteria is broken into the following categories.

- Project Type Screening
- Proximity to Transit Based Screening
- Low VMT Based Screening
- Public Use Screening

A land use project need only to meet one of the above screening criteria to result in a less than significant impact.

PROJECT TYPE SCREENING

County Guidelines state that projects generating fewer than 110 net new daily vehicle trips can be expected to have a less-than-significant VMT impact.

CURRENTLY ALLOWED OFFICE USE

The maximum development evaluated for the Specific Plan includes 1,199 multifamily residential units, 696,331 square feet of industrial use, 174,083 square feet of office use, and 139,266 square feet of commercial uses.

PROPOSED PROJECT

The Project proposes reduce the allowed intensity of office use from 174,083 square feet to 50,083 square feet, reduce the allowed intensity of industrial use from 696,331 square feet to 591,217 square feet, and increase the allowed residential intensity from 1,199 multifamily units to 1,557 multifamily units. These changes result in a net increase of 358 multifamily units from the allowable multifamily residential units within the Specific Plan in conjunction with reductions of 105,114 square feet of industrial use and 124,000 square feet of office use.

TRIP GENERATION COMPARISON

The net change in trips from reducing the industrial by 105,114 square feet and the office use by 124,000 square feet and increasing to add 358 multifamily residential units is shown on Table 1. The proposed Project will result in a net increase of 562 two-way trip ends per day with a reduction of 134 AM peak hour trips and a reduction of 73 PM peak hour trips.

TABLE 1: TRIP GENERATION COMPARISON

Land Use[2]	ITE LU Code	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
General Light Industrial	110	TSF	0.65	0.09	0.74	0.09	0.56	0.65	4.87
Multifamily (Low-Rise) Residential	220	DU	0.10	0.30	0.40	0.32	0.19	0.51	6.74
General Office (Regression Equation)	710	TSF	1.36	0.25	1.61	0.26	1.25	1.51	10.80

[1] DU = Dwelling Units; TSF = Thousand Square Feet

[2] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Currently Allowed: Industrial	105.114	TSF	68	9	77	10	59	69	512
Currently Allowed: General Office	124.000	TSF	169	31	200	32	155	187	1,340
Reduction to Currently Allowed Maximum			237	40	277	42	214	256	1,852
Proposed: Multifamily Residential[2]	358	DU	34	109	143	115	68	183	2,414
Net Change			**-203**	**69**	**-134**	**73**	**-146**	**-73**	**562**

[1] DU = Dwelling Units; TSF = Thousand Square Feet

[2] Increase of 358 multifamily units with a reduction of 105,114 square feet of industrial use and 124,000 square feet of general office use.

As shown in Table 1, the Project is estimated to generate trips above the 110 net new daily vehicle trip-threshold.

Project Type Screening criteria is not met.

PROXIMITY TO TRANSIT BASED SCREENING

Consistent with guidance identified in the County Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary. Based on the Screening Tool, the Project site is shown to be located within a TPA (see Attachment A).

Proximity to Transit based screening criteria is met.

LOW VMT BASED SCREENING

County Guidelines state that residential projects (home-based VMT) at 15% or below the baseline County-wide home-based average VMT per capita in areas with low VMT that incorporate similar VMT reducing features (i.e., density, mix of uses, transit accessibility) are presumed to have a less

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

than significant VMT impact. Using the Screening Tool, the County base line value was found to be 13.52 VMT per resident/capita and the 15% below threshold of 11.49 VMT per resident/capita. The project was determined to have 3.4 VMT per resident/capita and, therefore is presumed to have a less than significant VMT impact (see Attachment A).

The Low VMT screening criteria is met.

PUBLIC USE SCREENING

County Guidelines recognize public use facilities (e.g. emergency services, libraries, community centers and public utilities) as having a less than significant impact on VMT. The Project consists of a reduction in the allowed intensity of office use in exchange for an in increase in intensity of residential units within the specific plan and, therefore, is not applicable to this screening criteria.

Public Use screening criteria is not met.

CONCLUSION

Based on our review of applicable VMT screening thresholds, the Project meets the Proximity to Transit and Low VMT Based Screening criteria and would therefore be presumed to result in a less than significant VMT impact; no additional VMT analysis is required.

If you have any questions, please contact me directly at aso@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.

Alexander So
Senior Associate

Charlene So, PE
Principal

REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **Conservation and Development Department.** *Contra Costa County Transportation Analysis Guidelines.* City of Contra Costa : s.n., 2020.

ATTACHMENT A
C/CAG SCREENING TOOL RESULTS

C/CAG VMT Estimation Tool Report

Project Details

Timestamp of Analysis: October 14, 2022, 09:58:10 AM

Project Name: North Rollins SP

Project Description: SPA

Project Location

jurisdiction: Burlingame

Inside a TPA? Yes (Pass)

apn	TAZ				
025280200	1652	025280500	1652	025280080	1652
025280430	1652	025262460	1652	025280210	1652
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025262240	1652	025166210	1652	025280480	1652
025262210	1652	025262070	1652	025262060	1652
025262050	1652	025166190	1652	025262040	1652
025166090	1652	025166060	1652	025166200	1652
025166060	1652	025262300	1652	025262290	1652
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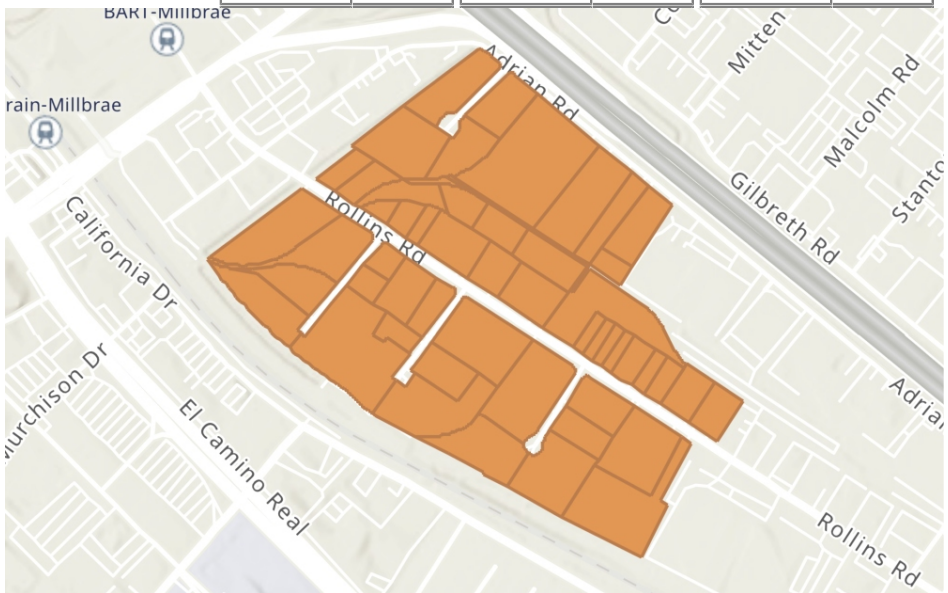

025169370	1652	025169370	1652	025169370	1652
025169370	1652	025169370	1652	025169370	1652
025169370	1652	025169370	1652	025169370	1652

Analysis Details

Data Version: C/CAG Travel Model

Analysis Methodology: TAZ

Baseline Year: 2022

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project 1:	Home-Based VMT per Resident
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.52
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	3.4	null	null
Low VMT Screening Analysis	Yes (Pass)	null	null