388 VINTAGE PARK DRIVE PROJECT
ENVIRONMENTAL IMPACT REPORT

STATE CLEARINGHOUSE NO. 2021070398

FOSTER CITY, CALIFORNIA

LSA

December 2021

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NOTICE OF AVAILABILITY (NOA)
CITY OF FOSTER CITY
PROPOSED RESEARCH & DEVELOPMENT BUILDING AT 388 VINTAGE PARK DRIVE
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) AND
PLANNING COMMISSION PUBLIC HEARING – JANUARY 25, 2022
STATE CLEARING HOUSE #2021070398

To: State Clearinghouse
Affected Agencies
Property Owners within 500 Feet of the Affected Property
Interested Organizations and Persons

From: City of Foster City, Planning/Code Enforcement and Building Division

Subject: **Notice of Availability of a Draft Environmental Impact Report for the 388 Vintage Park Drive Project**

Lead Agency: **City of Foster City**
610 Foster City Boulevard
Foster City, CA 94404
(650) 286-3244

Contact: **Shannon Allen**
Principal Planner/Contract Planner
sallen@fostercity.org
(650) 286-3219

NOTICE IS HEREBY GIVEN that the City of Foster City (City), as the lead agency under the California Environmental Quality Act (CEQA), has prepared a Draft Environmental Impact Report (DEIR) for the proposed 388 Vintage Park Drive Project (proposed project) in the Vintage Park General Development Plan (GDP) area.

PUBLIC REVIEW TIMELINE: In accordance with Section 15087 of the CEQA Guidelines, the City has prepared this Notice of Availability (NOA) to invite agencies, organizations, and interested parties to provide comments on the DEIR. The public review period for the DEIR begins December 17, 2021, and ends January 31, 2022. The City must receive all written comments regarding the adequacy of the DEIR within this time period. Please provide written comments to Shannon Allen, Principal Planner/Contract Planner, post-marked by January 31 or by email by **5:00 p.m. on January 31, 2022**, at the address shown above, with "388 Vintage Park Drive Project EIR" as the subject. Public agencies that provide comments are asked to include a contact person for the agency.

PUBLIC HEARING: Further notice is hereby given that comments on the DEIR will be accepted as part of the Planning Commission meeting tentatively scheduled on **January 25, 2022,** at **7:00 p.m.** In response to the ongoing COVID-19 pandemic, the Planning Commission meeting will be held in-person at Foster City Council Chambers located at 620 Foster City Blvd, Foster City, as well as remotely via Zoom, which can be accessed at: www.fostercity.org/agendasandminutes.

DOCUMENT AVAILABILITY: Copies of the DEIR are available for review Monday through Friday, between the hours of 8:00 a.m. and 5:00 p.m., at City Hall, Community Development Department, 610 Foster City Boulevard, Foster City, CA, 94404, except on specified holidays. The DEIR is also available at the Foster City Public Library, at 1000 East Hillsdale Boulevard, and online, at: 388 Vintage Park Drive Project Page [https://www.fostercity.org/ search Community Development Major Projects or 388 Vintage Park Drive]

PROJECT TITLE: 388 Vintage Park Drive Project

PROJECT APPLICANT: W-SW 388 Owner IX, L.P. c/o SteelWave CDS, LLC (a Joint Venture by SteelWave and Helios Real Estate Partners)

PROJECT LOCATION AND EXISTING CONDITIONS: The project site is located north of State Route (SR 92) in the Vintage Park neighborhood in the City of Foster City, San Mateo County. The approximately 2.2-acre project site is located at 388 Vintage Park Drive (Assessor's Parcel Number [APN]: 094-901-270) and is generally surrounded by a mix of uses. The project site is bordered to the north by a commercial building, to the east by Vintage Park Drive, to the south by a small park owned by the Vintage Park Community Association (VPCA), and to the west by The Home Depot.

The project site is currently developed with a single-story, approximately 10,120-square-foot vacant commercial building. The existing building was constructed in approximately 1990 and was previously occupied by the El Torito restaurant until November 2018. A total of 178 surface parking spaces are provided across the project site. Vegetation on the site consists of small landscaped areas along the eastern border of the project site and approximately 55 mature trees throughout the site.

PROJECT DESCRIPTION: The proposed project would result in the demolition of the existing commercial building and construction of an approximately 120,164-square-foot, four-story (68-foot-tall, excluding a mechanical penthouse and associated equipment that would reach 80 feet) "B occupancy" Research and Development (R&D) office building including a ground-level parking garage with approximately 210 vehicle parking spaces, as well as associated open space, circulation and parking, and site improvements.

The proposed building would be located in the center of the project site. The second and third floors of the proposed building would each be approximately 33,000 square feet in size, while the fourth floor would be approximately 27,000 square feet. A total of 95,931 square feet of R&D space is proposed, approximately 50 percent of which would be laboratory space and 50 percent would be office space, distributed evenly throughout each floor. The mechanical penthouse would occupy approximately 20,000 square feet on the rooftop. It is anticipated that approximately 213 employees would be accommodated on the project site. A total of approximately 28,000 square feet of open space would be provided across the entire project site, including common ground floor open space, and an approximately 6,000-square-foot rooftop terrace on the fourth level.

PROJECT APPROVALS: The project site is designated Research/Office Park in the City's General Plan and is within the Commercial Mix District/Planned Development Combining District (C-M/PD). The project site is also part of the Vintage Park General Development Plan, which designates the site for restaurant use. The following City discretionary approvals would be required prior to development at the project site:

- Environmental Assessment
- General Development Plan Amendment/Rezoning
- Specific Development Plan/Use Permit
- Use Permit Modification (Amendments to Vintage Park Design Guidelines)
- Encroachment Permit
- Transportation Permit

RESPONSIBLE AGENCIES: The City requests the following agencies review the analysis within the DEIR regarding information relevant to your agency's statutory responsibilities in connection with the

proposed project, pursuant to CEQA Guidelines Section 15086. Your agency may need to use the EIR prepared by the City when considering any permits or other approvals that your agency must issue for the proposed project.

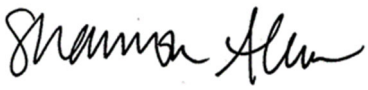
- California Department of Transportation
- California Regional Water Quality Control Board
- Bay Area Air Quality Management District
- City/County Association of Governments
- San Mateo County Transportation Authority
- San Mateo County Environmental Health Division
- City of San Mateo

INTRODUCTION TO EIR: An Initial Study for the project, which is also available for review online at: 388 Vintage Park Drive Project Page, was prepared to evaluate the potential environmental impacts of the proposed project and determine the appropriate level of additional environmental review, and was released on July 21, 2021, with a public review period from July 21, 2021 through August 19, 2021. Based on the findings of the Initial Study, a Draft EIR was prepared to address potential physical environmental effects of the proposed project for the following topics: Land Use and Planning, Aesthetics, Transportation, Air Quality, Greenhouse Gas Emissions, Noise, Hazards and Hazardous Materials, Public Services, and Utilities and Service Systems.

SIGNIFICANT ANTICIPATED ENVIRONMENTAL EFFECTS: The Draft EIR does not identify any significant and unavoidable environmental impacts from the proposed project. The proposed project would result in potentially significant impacts related to Transportation and Noise, but these impacts would be reduced to a less than significant level with implementation of identified mitigation measures. Impacts related to all other topics would be less than significant.

HAZARDS MATERIALS AND HAZARDOUS WASTE SITES: The project site is not located on any list of hazardous materials waste sites compiled pursuant to Section 65962.5 of the Government Code.

EIR PROCESS: In accordance with CEQA Guidelines Section 15105(a), the Draft EIR will be available for public review and comment for a 45-day review period. Following the close of the public review period on January 31, 2022, the City will prepare a Final EIR, which will include responses to all substantive comments received on the Draft EIR. The Draft EIR and Final EIR will be considered by the Planning Commission and the City Council in making the decision to certify the EIR and final actions on the project.



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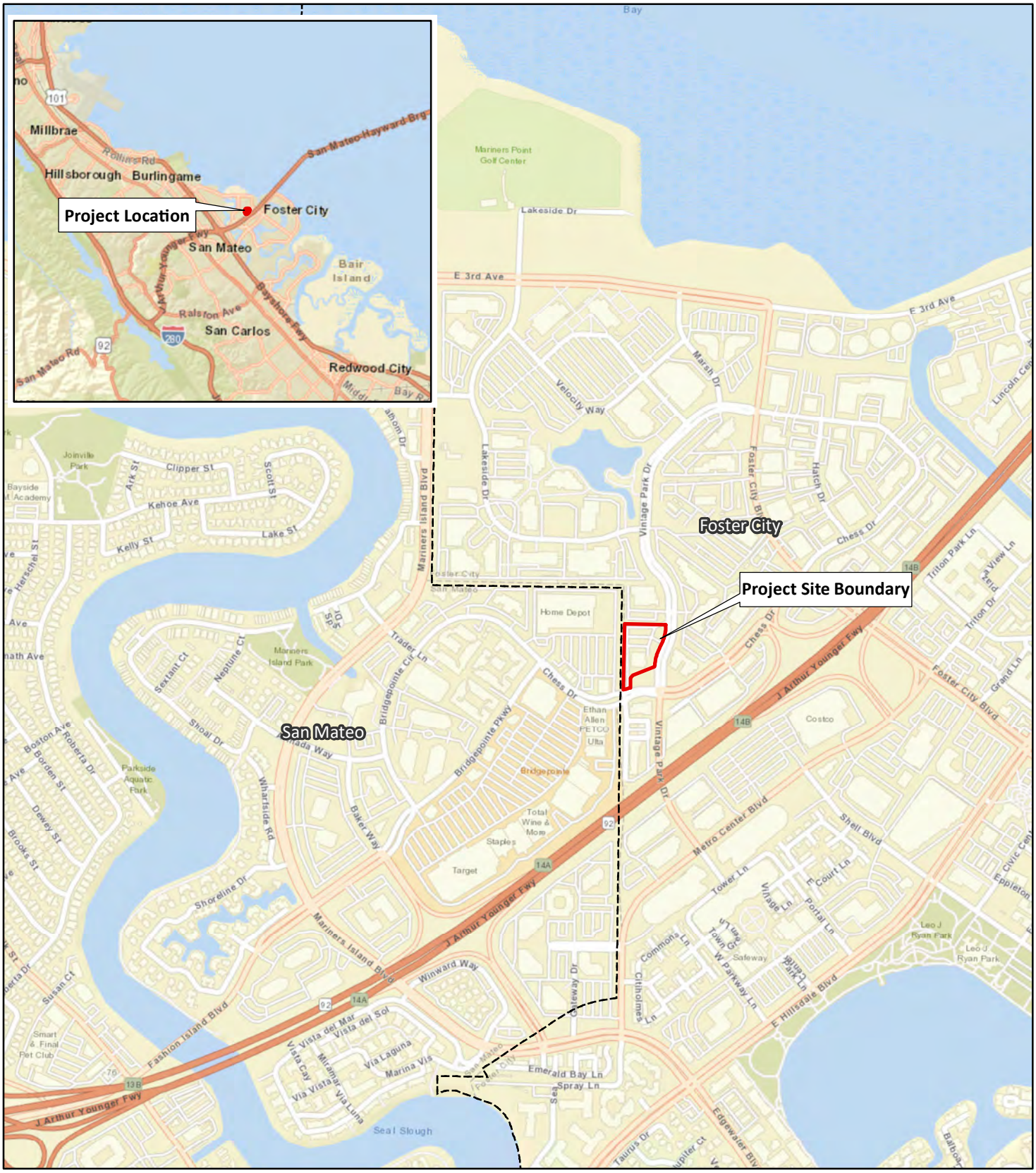
Shannon Allen, AICP, Principal Planner/Contract Planner
City of Foster City

December 17, 2021

Attached: Project Location and Regional Vicinity Map



SOURCE: ESRI World Map (06/19).

I:\CFS2101\GIS\Maps\Figure 3-1_Project Location and Regional Vicinity Map.mxd (6/14/2021)

388 Vintage Park Drive Project

Project Location and Regional Vicinity Map

388 VINTAGE PARK DRIVE PROJECT
ENVIRONMENTAL IMPACT REPORT

FOSTER CITY, CALIFORNIA

Submitted to:

Marlene Subhashini, Community Development Director
City of Foster City
Community Development Department
610 Foster City Boulevard
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Prepared by:

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Project No. CFS2101

LSA

December 2021

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APPENDICES

(Printed separately)

FIGURES AND TABLES

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LIST OF ABBREVIATIONS AND ACRONYMS

µg/m^3	micrograms per cubic meter
AB	Assembly Bill
ADA	Americans with Disabilities Act
AFY	acre-feet per year
AIA	Airport Influence Area
Air Basin	San Francisco Bay Area Air Basin
APS	Alternative Planning Strategy
BAAQMD	Bay Area Air Quality Management District
BMP	best management practices
BAWSCA	Bay Area Water Supply and Conservation Agency
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CalEnviroScreen	California Communities Environmental Health Screening Tool
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
CAP	Climate Action Plan
CARB	California Air Resources Board
CARB	California Air Resources Board
CARE	Community Air Risk Evaluation
CAT	Climate Action Team
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFC	California Fire Code

CH_4	methane
City	City of Foster City
Clean Air Plan	2017 Bay Area Clean Air Plan
CLUP	San Mateo County Comprehensive Airport Land Use Plan
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	Condition(s) of Approval
COA	Condition(s) of Approval
CPUC	California Public Utilities Commission
CRMP	Construction Risk Management Plan
CVC	California Vehicle Code
DOT	United State Department of Transportation
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EMID	Estero Municipal Improvement District
ESL	Environmental Screening Level
EV	electric vehicle
FAA	Federal Aviation Administration
FCAA	federal Clean Air Act
GDP	General Development Plan
General Plan	Foster City General Plan
GHG	greenhouse gas
Gilead	Gilead Sciences, Inc.
Gilead	Gilead Sciences, Inc.
GWP	global warming potential
HFCs	hydrofluorocarbons
HRA	health risk assessment

IPCC	United Nations Intergovernmental Panel on Climate Change
LEED	Leadership in Energy and Environmental Design
LID	Low Impact Development
LTS	less than significant impact
mgd	million gallons per day
mgy	million gallons per year
MMT CO_2e	million metric tons of carbon dioxide equivalent
MPOs	Metropolitan Planning Organizations
MRP	Municipal Regional Stormwater NPDES Permit
MT CO_2e	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NOP	Notice of Preparation
NO_X	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OSHA	Occupational Safety and Health Administration
OSFM	California Office of the State Fire Marshal
PCB	polychlorinated biphenyl
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in size
POTW	publicly owned treatment works
ppm	parts per million
project	388 Vintage Park Drive Project
PUE	public utility easement
R&D	research and development

R&D	research and development
RCRA	Resource Conservation and Recovery Act of 1976
RWS	San Francisco Public Utilities Commission Regional Water System
S	significant impact
SB	Senate Bill
SBx7-7	Senate Bill x7-7
SBWMA	South Bayside Waste Management Authority
SCS	Sustainable Community Strategy
SDP	Specific Development Plan
SDS	Safety Data Sheet
SF_6	sulfur hexafluoride
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
Shoreway	Shoreway Environmental Center
SIP	State Implementation Plan
SMCEHS	San Mateo County Environmental Health Services
SMCFD	San Mateo Consolidated Fire Department
SR-92	State Route 92
State Water Board	State Water Resources Control Board
SU	unavoidable impact
SWPPP	Stormwater Pollution Prevention Plan
TDM	Transportation Demand Management
USEPA	United States Environmental Protection Agency
UWMP	2020 Urban Water Management Plan
VMT	vehicle miles traveled
VPCA	Vintage Park Community Association
WSA	Water Supply Assessment

WSCP	Water Shortage Contingency Plan
WSIP	Water System Improvement Plan
WWTP	San Mateo Wastewater Treatment Plant
Zoning Ordinance	Foster City Zoning Ordinance

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1.0 INTRODUCTION

1.1 PURPOSE OF THIS EIR

In compliance with the California Environmental Quality Act (CEQA) and the City of Foster City (City)/Estero Municipal Improvement District (EMID) Environmental Review Guidelines,[1] this Environmental Impact Report (EIR) describes the potential environmental impacts of the proposed 388 Vintage Park Drive Project (project) submitted by W-SW 388 Owner IX, L.P. c/o SteelWave CDS, LLC, a Joint Venture by SteelWave and Helios Real Estate Partners (the project sponsor). The City is the CEQA Lead Agency for environmental review.

The purpose of this EIR is to inform City decision-makers, responsible agencies, and the general public about the proposed project and the potential physical environmental consequences of project implementation. This EIR also examines alternatives to the proposed project and recommends mitigation measures to reduce or avoid potentially significant physical environmental impacts, to the extent feasible. This EIR will be used as an informational document by the City's Planning Commission and/or City Council, responsible agencies, and the public in their review of the proposed project and associated approvals described below and in more detail in Chapter 3, Project Description.

1.2 PROPOSED PROJECT

The 2.2-acre project site is at 388 Vintage Park Drive in the Vintage Park Drive neighborhood of Foster City, San Mateo County. The project site is bordered to the north by commercial uses, to the east by Vintage Park Drive, to the south by a small park owned by the Vintage Park Community Association, and to the west by a commercial warehouse building. The project site is currently developed with a single-story, approximately 10,120-square-foot vacant commercial building, formerly occupied by a restaurant (El Torito) until November 2018. The proposed project would result in the demolition of the existing restaurant building and construction of an approximately 120,164-square-foot, four-story (68-foot-tall, excluding a mechanical penthouse and associated equipment that would reach 80 feet) office building including a ground-level parking podium and surface parking totaling 210 vehicle parking spaces, as well as associated open space, circulation and loading, and infrastructure improvements.

Discretionary actions by the City that would be necessary for development of the proposed project include environmental review, General Development Plan Amendment/Rezoning, a Specific Development Plan/Use Permit, a Use Permit Modification (Amendments to Vintage Park Design Guidelines), an Encroachment Permit, and a Transportation Permit.

1.3 EIR SCOPE

The City circulated a Notice of Preparation (NOP) informing responsible agencies and interested parties that an EIR would be prepared for the proposed project and indicated the environmental topics anticipated to be addressed in the EIR. An Initial Study circulated with the NOP. The NOP and

[1] Foster City, City of/Estero Municipal Improvement District. 2007. *Environmental Review Guidelines.* October 1.

the Initial Study were published on July 21, 2021, and the NOP was mailed to public agencies, organizations, property owners within 1,000 feet of the site, and individuals likely to be interested in the potential impacts of the proposed project. A scoping session was held as a public meeting before the Planning Commission on August 12, 2021, to solicit feedback regarding the scope and content of the EIR. Both verbal comments from members of the Planning Commission and the public provided during the scoping session and three written comments provided by members of the Planning Commission and the public on the NOP were received by the City and considered during preparation of this EIR. Copies of the NOP, comment letters, and a summary of the verbal comments received are included in Appendix A.

Based on the preliminary analysis provided in the Initial Study (Appendix B), consultation with City staff, and review of the comments received during the scoping process, the following environmental topics are addressed in Chapter 4, Setting, Impacts, and Mitigation Measures, of this EIR:

4.1 Land Use and Planning
4.2 Aesthetics
4.3 Transportation
4.4 Air Quality
4.5 Greenhouse Gas Emissions
4.6 Noise
4.7 Hazards and Hazardous Materials
4.8 Public Services
4.9 Utilities and Service Systems

It has been determined that the following potential environmental effects of the proposed project would be less than significant or have no impact, and therefore, these topics are "scoped out" and not further studied in detail in this EIR: agriculture and forestry resources, biological resources, cultural resources, energy, geology and soils, hydrology and water quality, mineral resources, population and housing, recreation, and wildfire. Each of these topic areas is addressed in the Initial Study (Appendix B). Chapter 6, Other CEQA Considerations, of this EIR provides a summary of the analysis and conclusions for each environmental topic evaluated in the Initial Study and not further addressed in Chapter 4. This EIR was prepared in compliance with City/EMID Environmental Review Guidelines.[2]

1.4 REPORT ORGANIZATION

This EIR is organized into the following chapters:

- **Chapter 1 – Introduction:** Discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.

- **Chapter 2 – Summary:** Provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or

[2] Foster City, City of/Estero Municipal Improvement District. 2007. *Environmental Review Guidelines.* October 1.

avoid potentially significant environmental impacts, and describes the alternatives to the proposed project.

- **Chapter 3 – Project Description:** Provides a description of the project site, project objectives, proposed project, and uses of this EIR.

- **Chapter 4—Setting, Impacts, and Mitigation Measures:** Describes the following for each technical environmental topic: existing conditions (setting), potential environmental impacts of the proposed project and their level of significance, and mitigation measures recommended to reduce or avoid identified potential impacts. Potential cumulative impacts are also addressed in each topical section. Potential adverse impacts are identified by levels of significance, as follows: significant impact (S), less than significant impact (LTS), and significant and unavoidable impact (SU). The significance of each potential impact is categorized before and after implementation of any recommended mitigation measure(s).

- **Chapter 5—Other CEQA Considerations:** Provides an analysis of effects found not to be significant, including the Initial Study findings, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.

- **Chapter 6—Alternatives:** Provides an evaluation of two alternatives to the proposed project in addition to the CEQA-required No Project alternative.

- **Chapter 7—Report Preparation:** Identifies preparers of the EIR and the references used.

- **Appendices:** The appendices contain the NOP and comment letters (Appendix A); the Initial Study (Appendix B); a Transportation Impact Study (Appendix C); Air Quality and Greenhouse Gas Emissions Data (Appendix D); Noise Data (Appendix E); a Water Supply Assessment (Appendix F); and a Sewer Capacity Study (Appendix G). All appendices are available online at: https://www.fostercity.org/commdev/project/388-vintage-park-drive-ea2021-0001-rz2021-0003-up2021-0023-up2021-0024. Paper copies are available upon request.

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2.0 SUMMARY

This chapter provides an overview of the proposed project and findings identified in this Environmental Impact Report (EIR), prepared pursuant to the California Environmental Quality Act (CEQA), including a discussion of alternatives and cumulative project impacts.

2.1 PROJECT UNDER REVIEW

This EIR has been prepared to evaluate the potential environmental consequences of implementation (i.e., construction and operation) of the proposed 388 Vintage Park Drive Project (project) submitted by W-SW 388 Owner IX, L.P. c/o SteelWave CDS, LLC, a Joint Venture by SteelWave and Helios Real Estate Partners (the project sponsor). The approximately 2.2-acre project site is at 388 Vintage Park Drive in Foster City, San Mateo County. The project site is bounded by a commercial building to the north, Vintage Park Drive to the east, Chess Drive to the south, and to the west by The Home Deport commercial warehouse building. The project site is currently developed with a 10,120-square-foot vacant commercial building, formerly occupied by a restaurant (El Torito) until November 2018. Vegetation on the site consists of small landscaped areas along the eastern border of the project site and 55 mature trees throughout the site.

The proposed project would result in the redevelopment of the project site with a 120,164-square-foot, four-story office building, which would include a ground-level parking podium and surface parking, as well as associated open space, circulation and loading, and infrastructure improvements. The proposed building would be a maximum of 68 feet in height, excluding a mechanical penthouse and associated equipment that would reach 80 feet.

The proposed building would be a “B occupancy” research and development (R&D) office use that would include three levels of occupied space above a single-level of ground floor parking. The proposed building would be at the center of the project site. The second and third floors of the proposed building would each be approximately 33,000 square feet in size, whereas the fourth floor would be approximately 27,000 square feet. A total of 95,931 square feet of R&D space is proposed, approximately 50 percent of which would be laboratory space and 50 percent would be office space, distributed evenly throughout each floor. It is anticipated that 213 employees would be accommodated on the project site.

A total of approximately 28,000 square feet of open space would be provided across the entire project site, consisting of 22,000 square feet of ground level common open space and an approximately 6,000-square-foot terrace on the fourth level. Approximately 53 new trees would be planted throughout the site.

The ground level of the proposed building would include a garage that would contain approximately 102 parking spaces that would be accessed from a driveway at the northwest corner of the proposed building. An additional 108 surface parking spaces would be provided for a total of 210 parking spaces. A total of 20 bicycle spaces would be provided in a long-term storage room in the parking garage.

Discretionary actions by the City of Foster City (City) necessary for development of the proposed project include environmental review, General Development Plan Amendment/Rezoning, a Specific Development Plan/Use Permit, a Use Permit Modification (Amendments to Vintage Park Design Guidelines), an Encroachment Permit, and a Transportation Permit. Refer to Chapter 3, Project Description, for a complete description of the project's location, context, and objectives, details of the proposed project itself, and a summary of required approvals and entitlements.

2.2 POTENTIAL AREAS OF CONTROVERSY

A total of three commenters submitted written responses to the Notice of Preparation (NOP), in addition to the verbal comments received at the public scoping session held on August 12, 2021. The NOP, comments received, and as summary from the scoping session are included in Appendix A. Comments in response to the NOP generally identified the following areas of potential concern:

- Vehicle miles traveled (VMT) analysis and mitigation
- The application of Assembly Bill 52 and compliance with tribal consultation requirements
- The Geotechnical Report prepared for the proposed project

Comments related to traffic, transportation, and circulation were considered and addressed in Section 4.3, Transportation, of this EIR. Comments related to geology and soils and tribal cultural resources are addressed in Sections 3.8, Geology and Soils, and 3.18, Tribal Cultural Resources, of the Initial Study (Appendix B).

2.3 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This summary provides an overview of the analysis contained in the Initial Study (Appendix B) and Chapter 4 Setting, Impacts, and Mitigation Measures, of this EIR.

2.3.1 Findings of the Initial Study

The Initial Study for the proposed project is included in Appendix B to this EIR. The Initial Study identified (1) no impacts, (2) less than significant impacts, or (3) less than significant impacts with implementation of standard mitigation measures related to the following environmental issues:

- Agriculture and Forestry Resources
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Hydrology and Water Quality
- Mineral Resources
- Population and Housing
- Public Services (Schools, Park, and Other Facilities)
- Recreation
- Tribal Cultural Resources
- Wildfire

The proposed project would be required to comply with standard Conditions of Approval (COA) required by the City for approval of all Major Use Permits. Applicable COAs are identified in the regulatory setting for each environmental topic. For a complete description of potential impacts identified in the Initial Study, please refer to the specific discussion within each topical section of the Initial Study (Appendix B). Chapter 5, Other CEQA Considerations, also includes a summary of the findings for each topic not discussed in the EIR.

The Initial Study identified topic areas that require study pursuant to the settlement agreement and potential impacts requiring more detailed evaluation related to the following environmental issues, which are further evaluated in Chapter 4 of this EIR:

- Land Use and Planning
- Aesthetics
- Transportation
- Air Quality
- Greenhouse Gas Emission
- Noise
- Hazards and Hazardous Materials
- Public Services
- Utilities and Service Systems

2.3.2 Significant Impacts

CEQA defines a significant impact on the environment as "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." As discussed in more detail in Chapter 4.0 of this EIR, impacts in the following areas would be potentially significant without the implementation of mitigation measures, but would be reduced to a less than significant level if the mitigation measures recommended in this report are implemented:

- Transportation (site access)
- Noise (interior exposure to construction noise)

Impacts related to land use and planning, aesthetics, air quality, greenhouse gas emissions, hazards and hazardous materials, public services, and utilities and service systems would be less than significant and no mitigation measures would be required.

2.3.3 Significant Unavoidable Impacts

With implementation of the mitigation measures recommended in this EIR, all project impacts would be reduced to a less than significant level and the proposed project would not result in any significant unavoidable impacts.

2.3.4 Cumulative Impacts

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts that are individually limited, but cumulatively significant. These impacts can result from the proposed project when combined with other past, present, or reasonably foreseeable future projects. As described in Section 4.0 of this EIR the cumulative impacts analysis in this EIR is based on information provided by the City on currently planned, approved, or proposed projects and regional projections for the area. All identified impacts of the proposed project would be individually limited and would not be cumulatively considerable. Cumulative impacts would be less than significant.

2.3.5 Alternatives to the Project

In accordance with CEQA and the *State CEQA Guidelines* (Section 15126.6), an EIR must describe a reasonable range of alternatives to the project, or to the project's location, that could attain most of the project's basic objectives while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

The two alternatives to the proposed project discussed and analyzed in Chapter 6 of this EIR are:

- The **No Project Alternative**, which assumes the project site would continue to be occupied by the existing single-story, 10,120-square-foot commercial building. It is assumed that the building would continue to be vacant. No modifications to existing site access or infrastructure would take place.

- The **Restaurant Alternative**, which assumes the project site would continue to be occupied by the existing single-story, 10,120-square-foot commercial building. It is assumed that a new sit-down restaurant use would occupy the building. Exterior modifications to the existing building could take place; however, no modifications to the existing site access or infrastructure would take place.

2.4 SUMMARY TABLES

Information in Table 2.A, Summary of Impacts and Mitigation Measures, from the Initial Study summarizes the recommended mitigation measures and COAs from the Initial Study. Information in Table 2.B, Summary of Impacts and Mitigation Measures from the EIR, has been organized to correspond with environmental issues discussed in Chapter 4. Tables 2.A and 2.B are arranged in four columns: (1) impacts, (2) level of significance without mitigation, (3) mitigation measures, and (4) level of significance with mitigation. Levels of significance are categorized as follows:

LTS	Less Than Significant
S	Significant
SU	Significant Unavoidable

For a complete description of potential impacts and recommended mitigation measures, please refer to the specific topical discussions in Chapter 4 and the Initial Study (Appendix B).

Table 2.A: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
3.2: AGRICULTURE AND FORESTRY RESOURCES			
There are no significant impacts to agriculture and forestry resources.			
3.4: BIOLOGICAL RESOURCES			
Project construction could impact the special-status white-tailed kite and other nesting birds protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code.	S	**Mitigation Measure BIO-1:** If possible, the project sponsor shall avoid construction activities during the bird nesting season (February 1 through August 31). If construction activities are scheduled during the nesting season, a qualified biologist shall conduct a pre-construction survey of all suitable nesting habitat (i.e., trees, shrubs, structures) within 250 feet of the project site (where accessible). The pre-construction survey shall be conducted no more than 14 days prior to the start of work. If the survey indicates the presence of nesting birds, protective buffer zones shall be established around the nests as follows: for raptor nests, the size of the buffer zone shall be a 250-foot radius centered on the nest; for other birds, the size of the buffer zone shall be a 50- to 100-foot radius centered on the nest. In some cases, these buffers may be increased or decreased depending on the bird species and the level of disturbance that will occur near the nest.	LTS
Project construction could impact the special-status pallid bat and other roosting bats protected by the California Department of Fish and Wildlife.	S	**Mitigation Measure BIO-2:** A qualified biologist shall conduct a pre-construction survey for roosting bats at all suitable bat roosting habitat (i.e., trees, the unoccupied building) within the project area within 14 days prior to the beginning of project-related activities. If active bat roosts are discovered or if evidence of recent prior occupation is established, a buffer shall be established around the roost site until the roost site is no longer active. Before any construction activities begin in the vicinity of the identified bat roosts on the project site, a qualified biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the bats and their habitat, the specific measures that are being implemented to conserve the bat roosts for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session. If an active bat roost is identified and would be impacted by the project, CDFW shall be contacted to determine the best methodology for removing the roost and to determine appropriate mitigation (if needed), which may include the construction of a new bat roost within the project area.	LTS
3.5: CULTURAL RESOURCES			
There are no significant impacts to cultural resources.			
3.6: ENERGY			
There are no significant impacts to energy.			

Table 2.A: Summary of Impacts and Mitigation Measures from the Initial Study

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
3.7: GEOLOGY AND SOILS			
There are no significant impacts to geology and soils.			
3.10: HYDROLOGY AND WATER QUALITY			
There are no significant impacts to hydrology and water quality.			
3.12: MINERAL RESOURCES			
There are no significant impacts to mineral resources.			
3.14: POPULATION AND HOUSING			
There are no significant impacts to population and housing.			
3.15: PUBLIC SERVICES[1]			
There are no significant impacts to schools, parks, or other public facilities.			
3.16: RECREATION			
There are no significant impacts to recreation.			
3.18: TRIBAL CULTURAL RESOURCES			
There are no significant impacts to tribal cultural resources.			
3.20: WILDFIRE			
There are no significant impacts to wildfire.			

Source: Compiled by LSA (2021).
Note: Sections 3.1, Aesthetics, 3.3, Air Quality, 3.8, Greenhouse Gas Emissions, 3.9, Hazards and Hazardous Materials, 3.11, Land Use and Planning, 3.13, Noise, and 3.17, Transportation, are addressed in the EIR and summarized in Table 2.B.
[1] As noted above, potential impacts related to schools, parks, and other public facilities are not further addressed in Section 4.8, Public Services, of this EIR.
CDFW = California Department of Fish and Wildlife
LTS = less than significant

Table 2.B: Summary of Impacts and Mitigation Measures from the EIR

Environmental Impacts	Level of Significance Without Mitigation	Mitigation Measures	Level of Significance With Mitigation
4.1: LAND USE AND PLANNING			
There are no significant impacts to land use and planning.			
4.2: AESTHETICS			
There are no significant impacts to aesthetics.			
4.3: TRANSPORTATION			
Impact TRA-1: Development of the proposed project would worsen an existing hazardous geometric design feature.	S	**Mitigation Measure TRA-1:** Prior to the issuance of a building permit, the project sponsor shall revise the project plans to show either: (1) signage, markings, hardscape, or other suitable treatments to prohibit both inbound and outbound left turns at the existing Chess Drive driveway; or (2) roadway improvements with side-by-side center left-turn lanes on Chess Drive that are separated by a hardscape median. A suggested conceptual configuration is shown in Figure 4.3-5 of the Draft EIR.	LTS
4.4: AIR QUALITY			
There are no significant impacts to air quality.			
4.5: GREENHOUSE GAS EMISSIONS			
There are no significant impacts to greenhouse gas emissions.			
4.6: NOISE			
Impact NOI-1: Noise from construction activities at the project site would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	S	**Mitigation Measure NOI-1:** The project contractor shall implement the following measures, where feasible, during construction of the project: • Electrical power, rather than diesel equipment, shall be used to run compressors and similar power tools and to power temporary structures, such as construction trailers or caretaker facilities. • All noise from workers' radios shall be controlled to a point that they are not audible at sensitive receptors near construction activity. • Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels.	LTS
4.7: HAZARDS AND HAZARDOUS MATERIALS			
There are no significant impacts to hazards and hazardous materials.			
4.8: PUBLIC SERVICES			
There are no significant impacts to public services.			
4.9: UTILITIES AND SERVICE SYSTEMS			
There are no significant impacts to utilities and service systems.			

Source: Compiled by LSA (2021).
LTS = less than significant

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3.0 PROJECT DESCRIPTION

This chapter describes the proposed 388 Vintage Park Drive Project (project) submitted by W-SW 388 Owner IX, L.P. c/o SteelWave CDS, LLC, a Joint Venture by SteelWave and Helios Real Estate Partners (the project sponsor) and evaluated in this Environmental Impact Report (EIR). A description of the proposed project's location, context, and objectives is followed by details of the proposed project itself and a summary of required approvals and entitlements.

3.1 PROJECT SITE

The following describes the geographic context of the proposed project site and provides a brief overview of the existing land uses within and in the vicinity of the site.

3.1.1 Regional Location and Access

The 2.2-acre project site is at 388 Vintage Park Drive in Foster City, San Mateo County. Foster City is approximately 23 miles south of San Francisco, at the southwest edge of San Francisco Bay.

Regional vehicular access to the project site is provided by State Route 92 (SR-92) via the Foster City Boulevard on- and off-ramps to the east and US Route 101, via the SR-92 interchange, to the southwest. Direct local access is via Vintage Park Drive and Chess Drive, which border the site immediately to the east and south. The project site is served by two nearby Caltrain stations: the Hayward Park Caltrain station is approximately 2.5 miles west of the project site, providing weekday service from San Francisco to Gilroy and weekend service from San Francisco to San Jose, and the Hillsdale Caltrain station is 3.4 miles to the southwest. The site is also served by two bus lines, the FCX and 251. The FCX bus line runs from the project site to downtown San Francisco and the 251 bus line runs from the project site to downtown Foster City, the Hillsdale Mall, and the Hillsdale Caltrain Station.

Figure 3-1 depicts the site's regional and local context. Figure 3-2 is an aerial photograph of the project site and the vicinity.

3.1.2 Site Characteristics and Current Site Conditions

The generally level project site is currently developed with a single-story, approximately 10,120-square-foot vacant commercial building. The existing building was constructed in approximately 1990 and was previously occupied by a restaurant (El Torito) until November 2018. Ingress and egress to the project site is provided by a driveway at the northeast corner of the project site along Vintage Park Drive and another driveway at the southwest corner of the site along Chess Drive. A total of 178 surface parking spaces are provided across the project site. Vegetation on the site consists of small landscaped areas along the eastern border of the project site and approximately 55 mature trees throughout the site.

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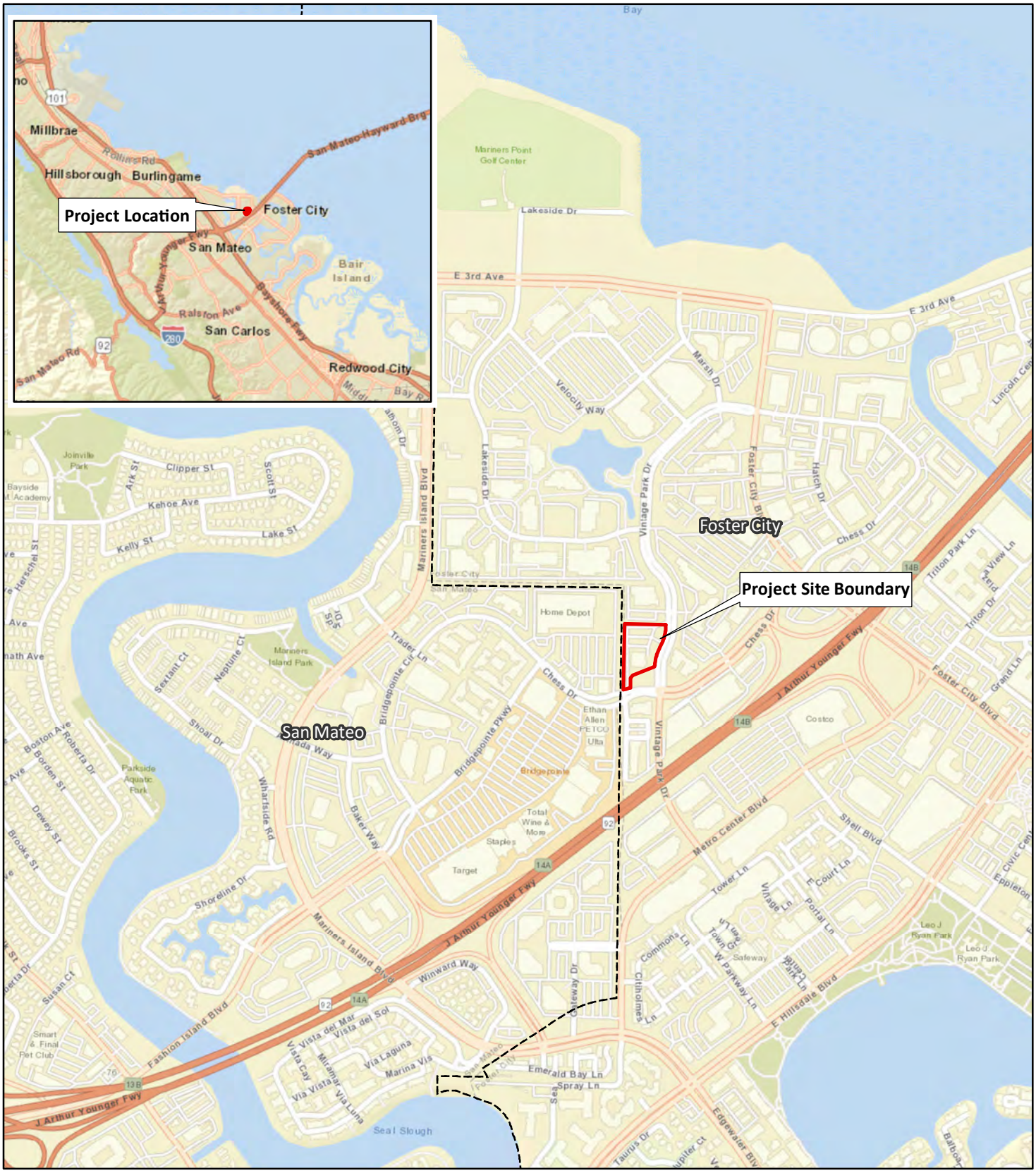

LSA

LEGEND

Project Site Boundary

FIGURE 3-1

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0 500 1000

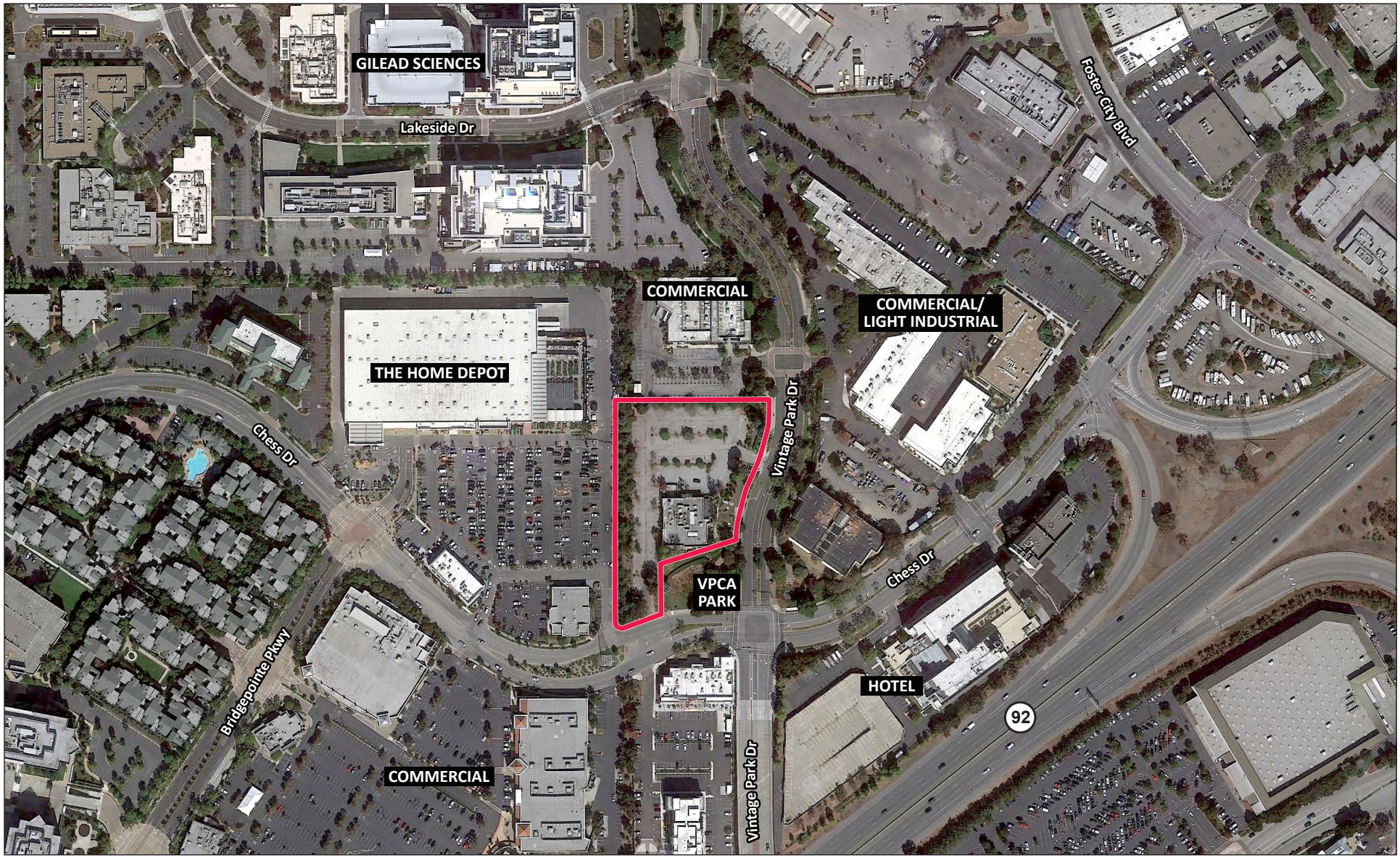
FEET

SOURCE: ESRI World Map (06/19).

I:\CFS2101\GIS\Maps\Figure 3-1_Project Location and Regional Vicinity Map.mxd (6/14/2021)

388 Vintage Park Drive Project EIR

Project Location and Regional Vicinity Map



LSA

FIGURE 3-2

0 200 400
FEET

N

Project Site Boundary

388 Vintage Park Drive Project EIR

Aerial Photograph of the Project Site and Surrounding Land Uses

SOURCES: Google Earth, 9/26/2020; LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-2.ai (6/10/2021)

The site has a number of existing easements, including an approximately 35-foot-wide Estero Municipal Improvement District (EMID) landscape and sanitary sewer easement along the eastern boundary, a 25-foot emergency vehicle access easement that runs along the western and northern borders, a 12-foot public utility easement along the southern border, and a 10-foot Pacific Gas & Electric Company (PG&E) easement in the northeastern corner.

Existing site conditions are depicted in Figure 3-3. Figure 3-4 depicts an aerial view of the project site and photos of existing site conditions are depicted in Figure 3-5; viewpoint locations are shown in Figure 3-4.

3.1.3 Regulatory Setting

The project site is within the Vintage Park Neighborhood, which is currently designated Research/Office Park in the City of Foster City's (City) General Plan.[1] This designation is intended for areas containing office, research and development, and manufacturing establishments whose operations are clean and quiet. Mixed-use projects that include some retail and residential uses in addition to office and research uses may, under certain conditions, be considered compatible with this designation.[2] The Vintage Park Design Guidelines Land Use Map[3] designates the site as "restaurant."

The project site is within the Commercial Mix District/Planned Development Combining District (C-M/PD). The C-M zoning allows for mixed commercial uses such as retail. However, the C-M district is required to be used only in conjunction with the combining zone PD, which is designed to accommodate various types of development and allow flexibility of design that is in accordance with the objectives and spirit of the General Plan. The current zoning for the project site is established by the Vintage Park General Development Plan (GDP), which designates the project site as a restaurant site.

3.1.4 Surrounding Land Uses

The project site is in the Vintage Park neighborhood in the northwest portion of the city at the municipal boundary between Foster City and San Mateo County. The Vintage Park neighborhood is generally bounded by the San Francisco Bay to the north, Foster City Boulevard to the east, SR-92 to the south, and the municipal boundary of San Mateo to the west. The project site is generally surrounded by a mix of uses, consisting mostly of new construction, as depicted in Figure 3-2 and further described below. Figures 3-6 and 3-7 include photos of surrounding land uses; refer to Figure 3-4 for photo viewpoint locations.

- **North of the Project Site.** The project site is bordered to the north by a commercial building (Photo 3; Figure 3-6). Further north of the project site is the Gilead Sciences, Inc. (Gilead) campus, Vintage Park Drive, and light industrial and commercial uses. The Gilead campus consists of approximately 23 life sciences and research and development (R&D) buildings, as well as associated parking and open space.

1 Foster City, City of. 2016. *Foster City General Plan*. February 1.
2 Foster City, City of. 2021a. *Foster City Municipal Code* (as amended). Title 17. January 19.
3 Foster City, City of. 2021b. *Vintage Park Design Guidelines.* January 22.

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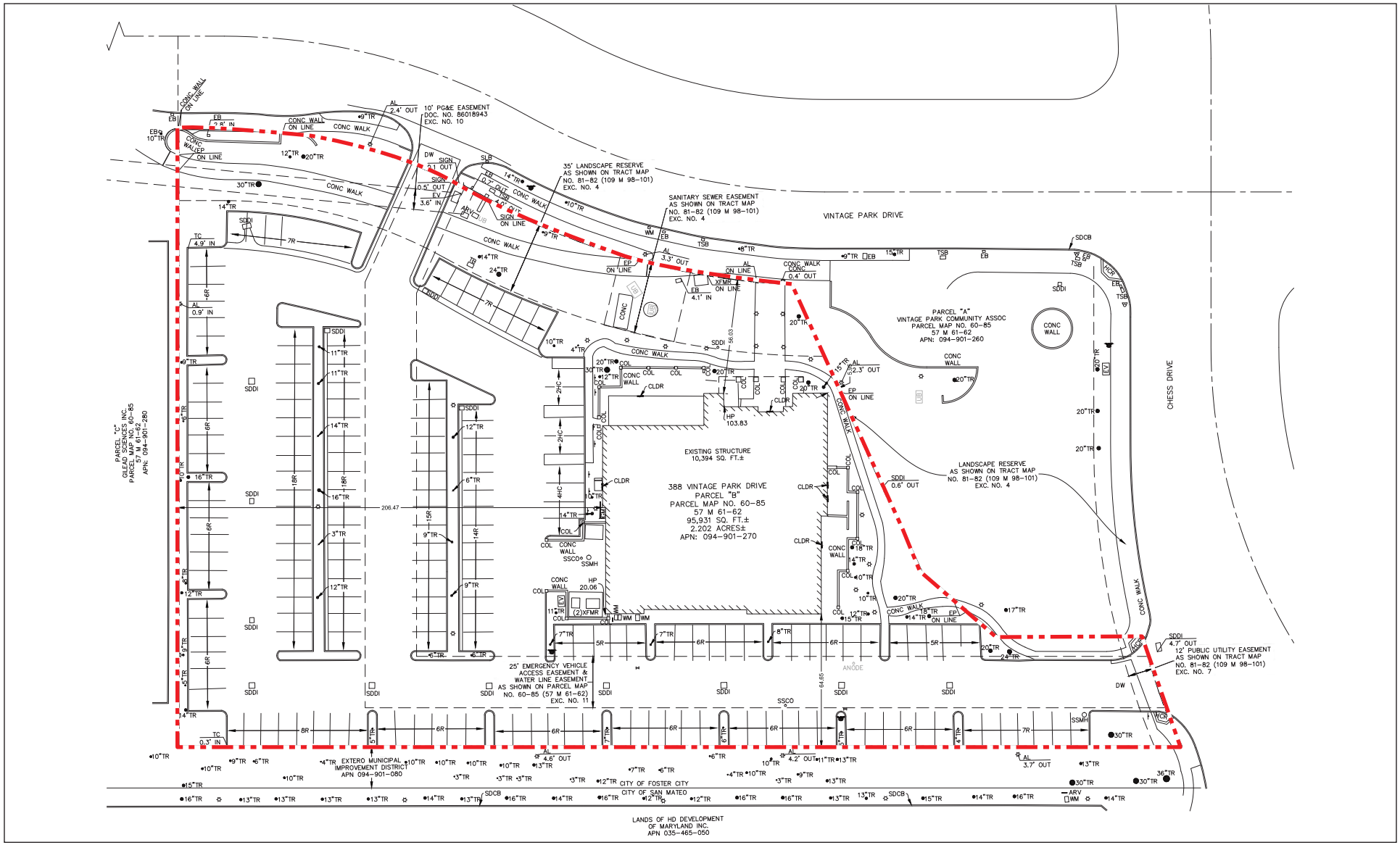

FIGURE 3-3

LSA

0 80 160
FEET

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Project Site Boundary

388 Vintage Park Drive Project EIR
Existing Site Conditions

SOURCES: DES; HELIOS; STEELWAVE, April 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-3.ai (6/10/2021)

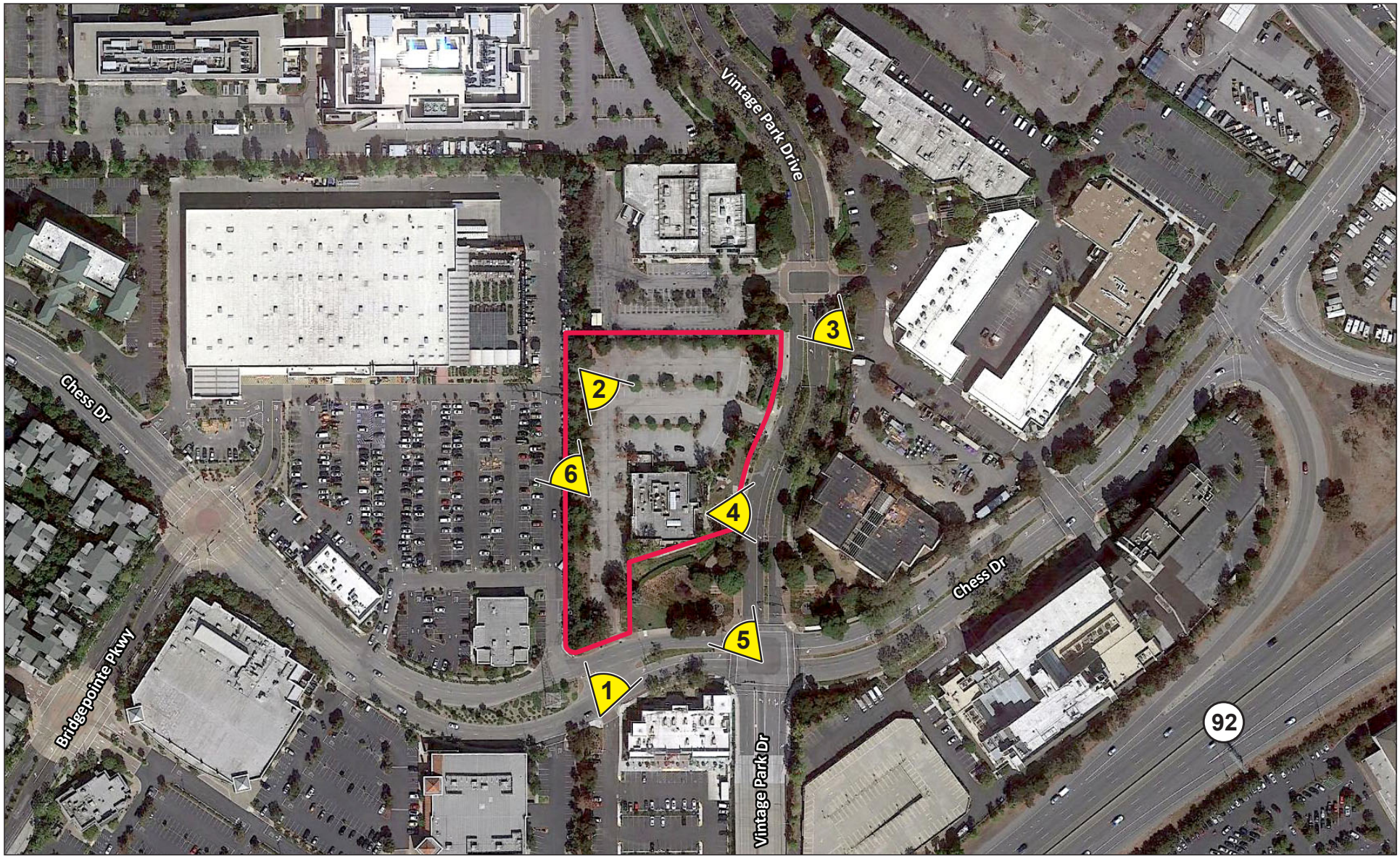

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FIGURE 3-4

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4 Photo Locations (Figures 1-5 and 1-14 through 1-15)

Project Site Boundary

388 Vintage Park Drive Project EIR

Photo Locations Map

SOURCES: Google Earth, 9/26/2020; LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-4.ai (6/21/2021)

Photo 1: View of the project site from Chess Drive, looking north

Photo 2: View from the northwest corner of the project site, looking southeast

LSA

FIGURE 3-5

388 Vintage Park Drive Project EIR
Photos of Existing Site

SOURCE: LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-5.ai (7/29/2021)

Photo 3: Photo of the commercial building north of the project site, as seen from Vintage Park Drive

Photo 4: Photo of the commercial building east of the project site, as seen from Vintage Park Drive

LSA

FIGURE 3-6

388 Vintage Park Drive Project EIR
Photos of Surrounding Land Uses

SOURCE: LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-6.ai (7/29/2021)

Photo 5: Photo of the VPCA park south of the project site, as seen from the intersection of Vintage Park Drive and Chess Drive

Photo 6: Photo of The Home Depot from the project site, looking west

LSA

FIGURE 3-7

388 Vintage Park Drive Project EIR
Photos of Surrounding Land Uses

SOURCE: LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-7.ai (7/29/2021)

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- **East of the Project Site.** The project site is bordered immediately to the east by Vintage Park Drive, which is a four-lane divided roadway in the vicinity of the project site. Further east of the project site are commercial and hotel uses (Photo 4; Figure 3-6), as well as the Foster City Boulevard on- and off-ramps for SR-92.

- **South of the Project Site.** The project site is bound immediately to the south by a small park owned by the Vintage Park Community Association (VPCA) (Photo 5; Figure 3-7). Further south is Chess Drive, across which are commercial and hotel uses and SR-92.

- **West of the Project Site.** The project site is bordered to the west by The Home Depot commercial warehouse building (Photo 6; Figure 3-7), past which are hotel and commercial uses. Bridgepoint Circle is farther west, across which are residential, commercial, and institutional uses.

3.2 PROJECT OBJECTIVES

As provided by the project sponsor, the objectives of the proposed project are to:

- Align with Foster City General Plan policies designating the project site for research/office park uses

- Activate a significant but previously neglected intersection and entrance into the Vintage Park Neighborhood

- Create more economic development opportunities in Foster City

- Support existing businesses within Foster City by bringing additional workers into the city;

- Increase the amount of life sciences research facilities available in Foster City to create economic benefit to the city

- Create a modern, efficient, and attractive building that will attract life science tenants to Foster City

- Enhance Foster City's reputation as a center for life science companies within the greater San Francisco Bay Area

3.3 PROPOSED PROJECT

This section provides a description of the proposed project as identified in the project sponsor's application materials submitted to the City, dated July 16, 2021.[4] The proposed project would result in the demolition of the existing restaurant building and construction of a 120,164-square-foot, four-

[4] It should be noted that project plans, including total building square footage, parking count and other project elements, may be subject to refinement prior to City action on project entitlements. The analysis in this Initial Study is conservative and evaluates the maximum development potential for the proposed project.

story (68-foot-tall, excluding a mechanical penthouse and associated equipment that would reach 80 feet) office building including a ground-level parking podium and surface parking totaling 210 vehicle spaces, as well as associated open space, circulation and loading, and infrastructure improvements.

Figure 3-8 depicts the overall proposed conceptual site plan for the proposed project. Figures 3-9 through 3-11 depict the proposed conceptual site plans for the ground level through the fourth floor of the proposed building. The roof plan is shown in Figure 3-12. Figures 3-13 and 3-14 show proposed conceptual building elevations, and Figure 3-15 shows the proposed conceptual sections.

3.3.1 Building Program

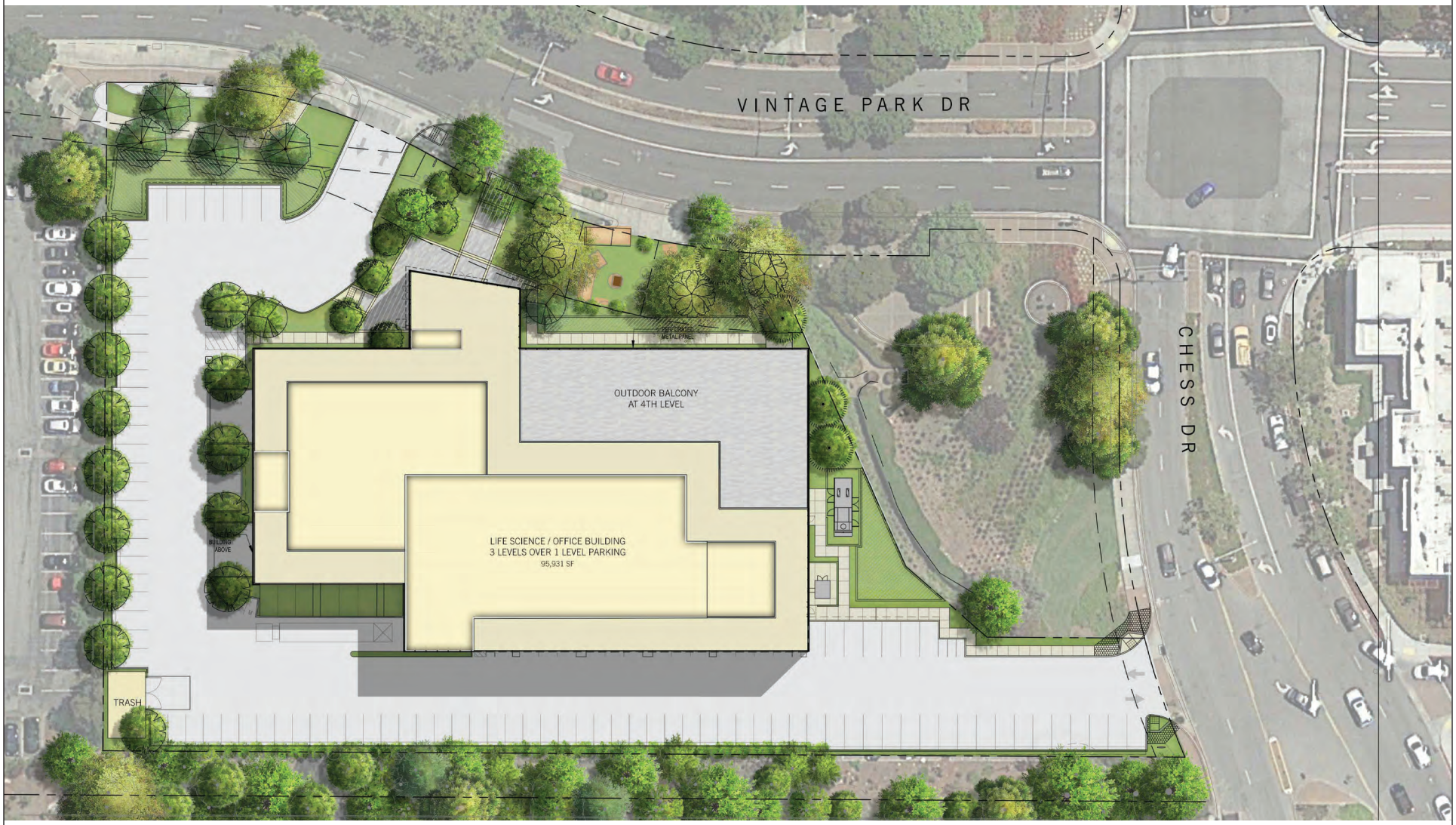
The proposed project would result in the redevelopment of the project site with a four-story "B occupancy"[5] R&D office use that would include three levels of occupied space above a single level of ground-floor parking. The proposed building would be in the center of the project site as shown in Figure 3-8. The second and third floors of the proposed building would each be approximately 33,000 square feet in size, while the fourth floor would be approximately 27,000 square feet. A total of 95,931 square feet of R&D space is proposed, approximately 50 percent of which would be laboratory space and 50 percent would be office space, distributed evenly throughout each floor. The mechanical penthouse would occupy approximately 20,000 square feet on the rooftop. The penthouse would be screened in metal cladding and would only be accessible to facility management and engineers.

It is anticipated that the project site would accommodate 213 employees, with variations throughout the day due to the nature of R&D uses, which typically operate outside of traditional office hours.

3.3.2 Open Space and Landscaping

A total of approximately 28,000 square feet of open space would be provided across the entire project site. Open space would consist of approximately 22,000 square feet of ground level common open space and an approximately 6,000-square-foot terrace on the fourth level. Of the existing 55 trees on the project site, 53 would be removed. A total of 53 new trees would be planted throughout the project site. Additionally, another 61 off-site trees would remain around the project site, including within the EMID strip, in the VPCA park, and along the Vintage Park Drive frontage. Landscaping and other plantings would be provided through the project site, including adjacent to Vintage Park Drive.

[5] The California Building Code Business Group B occupancy includes the use of a building or structure for office and professional service-type transactions, including laboratories for testing and research. It should be noted that portions of the proposed project may be classified as "L Occupancy," which includes the use of a building or structure, or a portion thereof, containing one or more laboratory suites as defined in Section 443 of the California Building Code. As described in this chapter, the potential use of the building for laboratory space is analyzed throughout this EIR. Therefore, a change in occupancy from "B" to "L" would not result in any new or more significant environmental impacts.



LSA

FIGURE 3-8

Project Boundary

0 20 40
FEET

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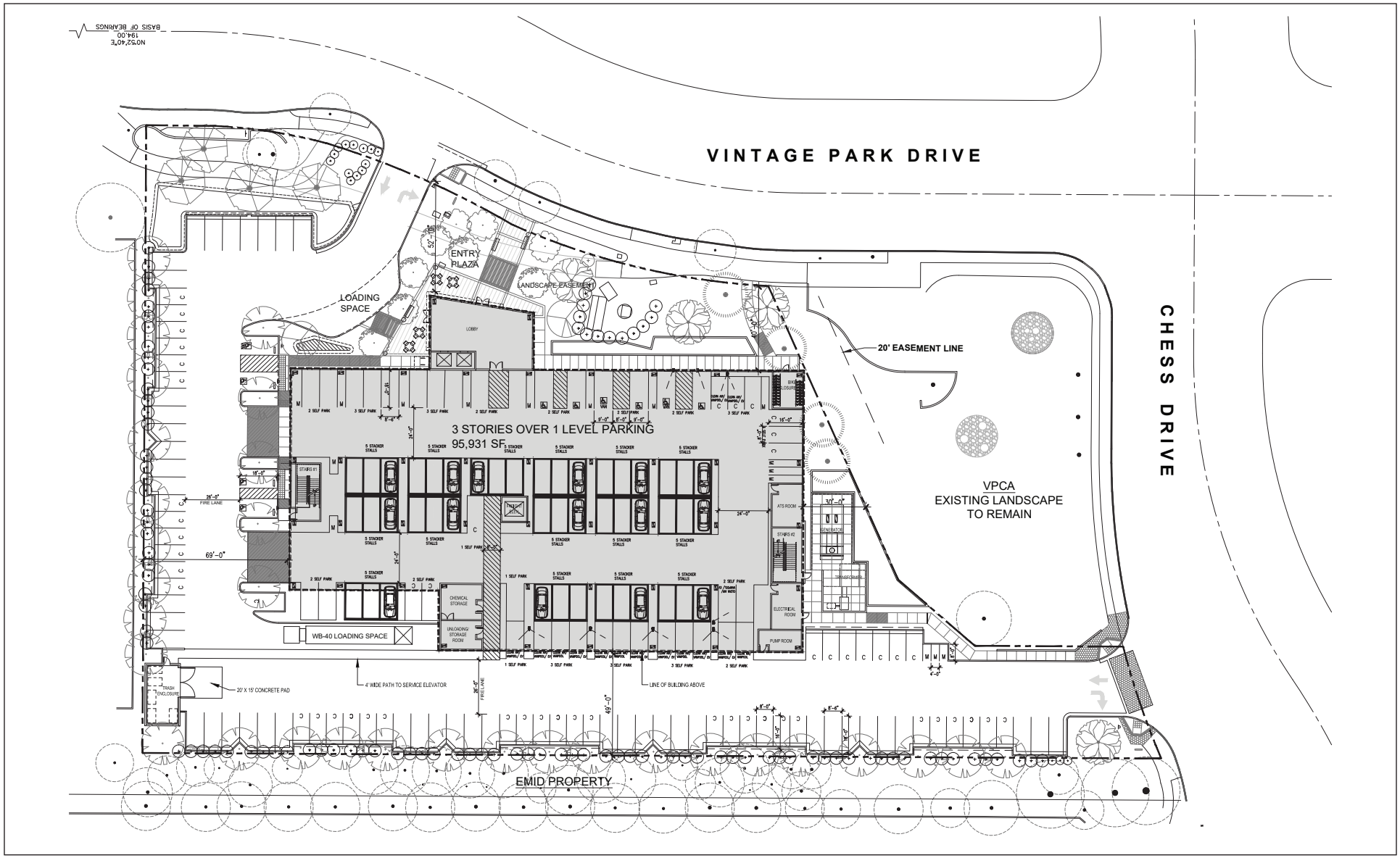
388 Vintage Park Drive Project EIR
Proposed Conceptual Site Plan

SOURCES: DES; HELIOS; STEELWAVE, April 18, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-8.ai (7/29/2021)



LSA

FIGURE 3-9

0 20 40
FEET

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Project Boundary

388 Vintage Park Drive Project EIR
Conceptual Ground Level Floor Plan

SOURCES: DES; HELIOS; STEELWAVE, October 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-9.ai (12/7/2021)

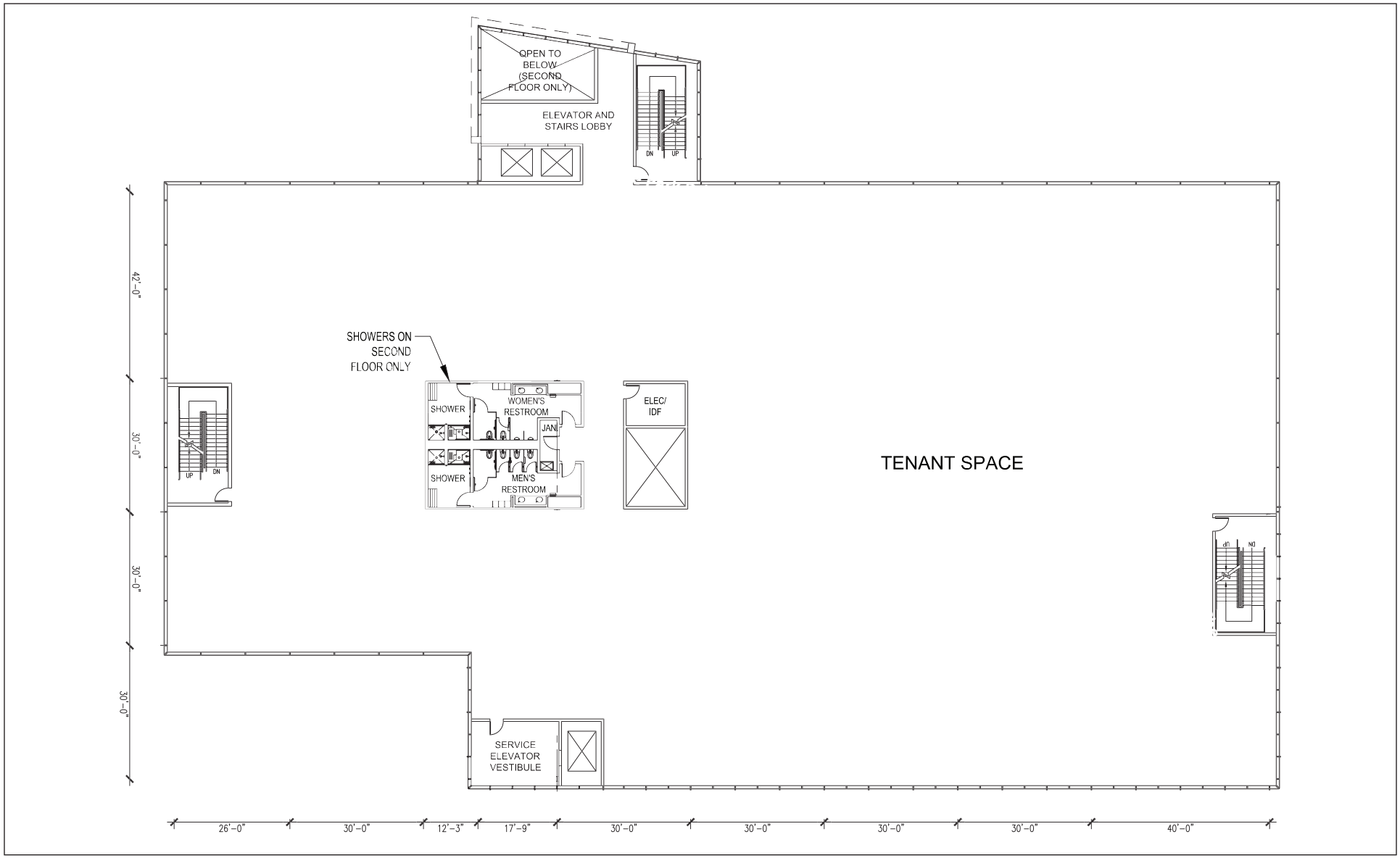

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FIGURE 3-10

0 16 32
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388 Vintage Park Drive Project EIR
Proposed Conceptual Second and Third Level Floor Plans

SOURCES: DES; HELIOS; STEELWAVE, April 2021

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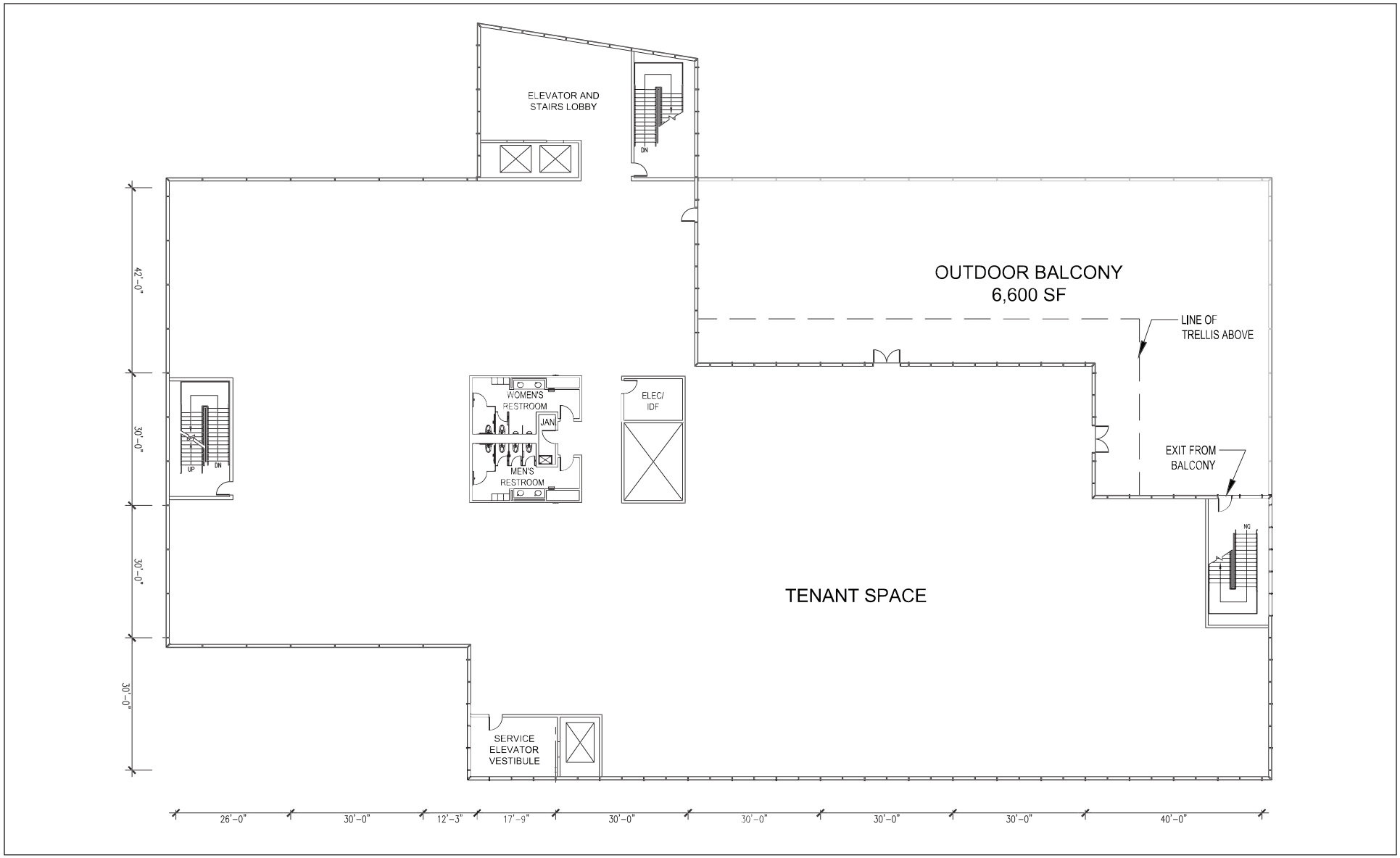


LSA

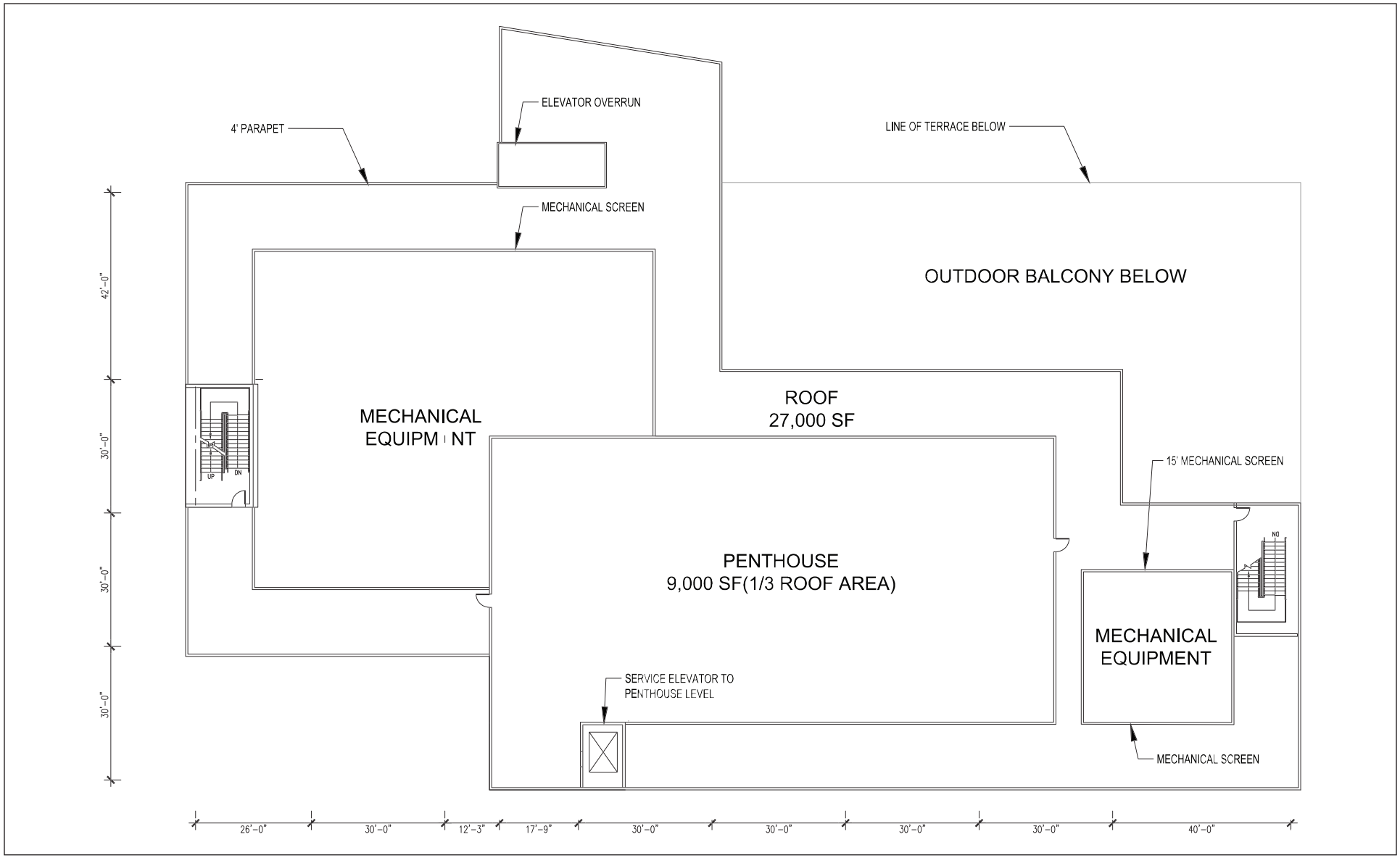
FIGURE 3-11

NOT TO SCALE

388 Vintage Park Drive Project EIR
Proposed Conceptual Fourth Level Floor Plans

SOURCES: DES; HELIOS; STEELWAVE, April 18, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-11.ai (7/29/2021)



LSA

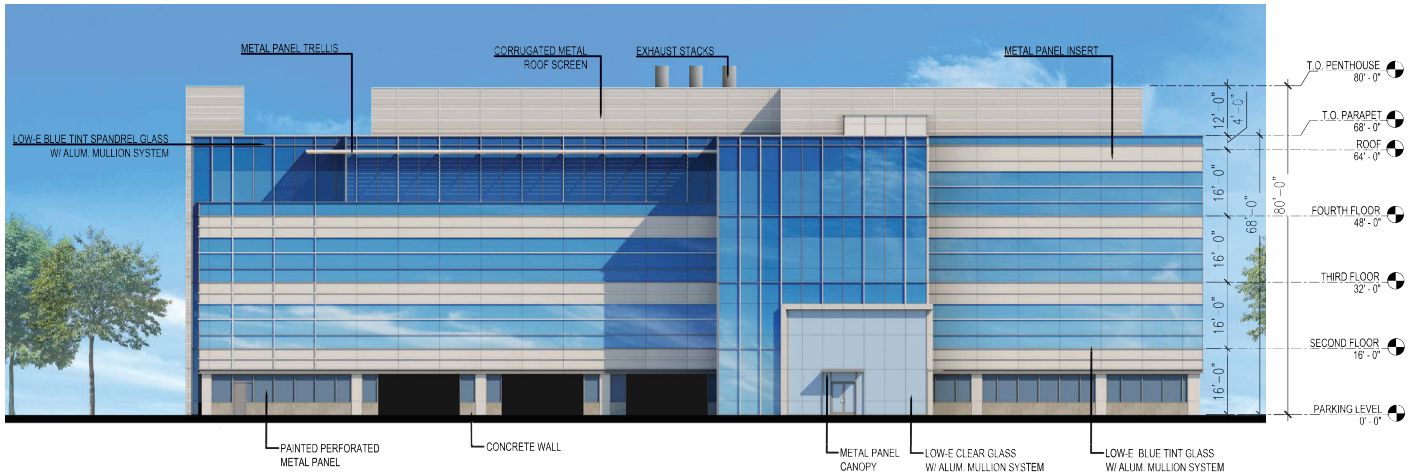
FIGURE 3-12

NOT TO SCALE

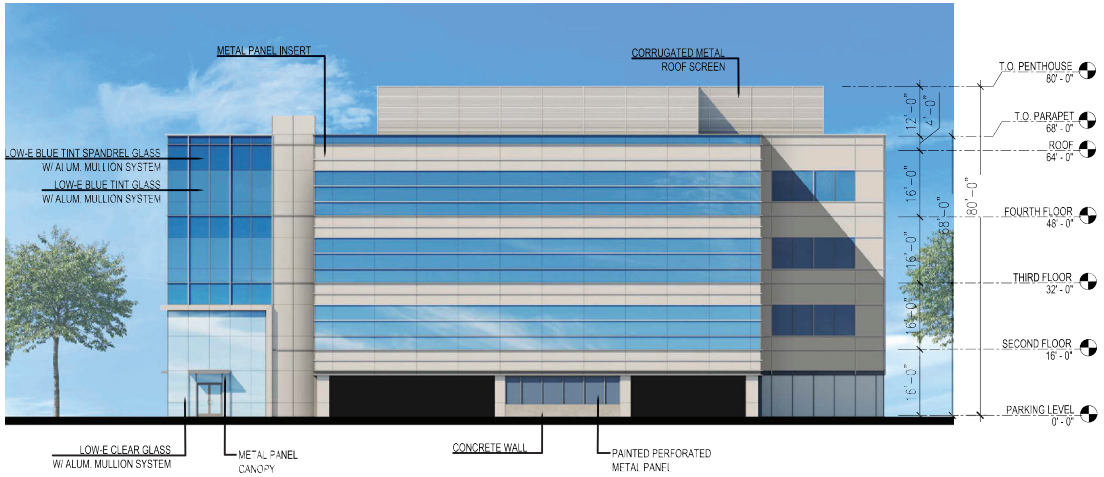
SOURCES: DES; HELIOS; STEELWAVE, April 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-12.ai (7/29/2021)

388 Vintage Park Drive Project EIR
Proposed Conceptual Roof Plan



East Elevation (façade along Vintage Park Drive)



North Elevation

LSA

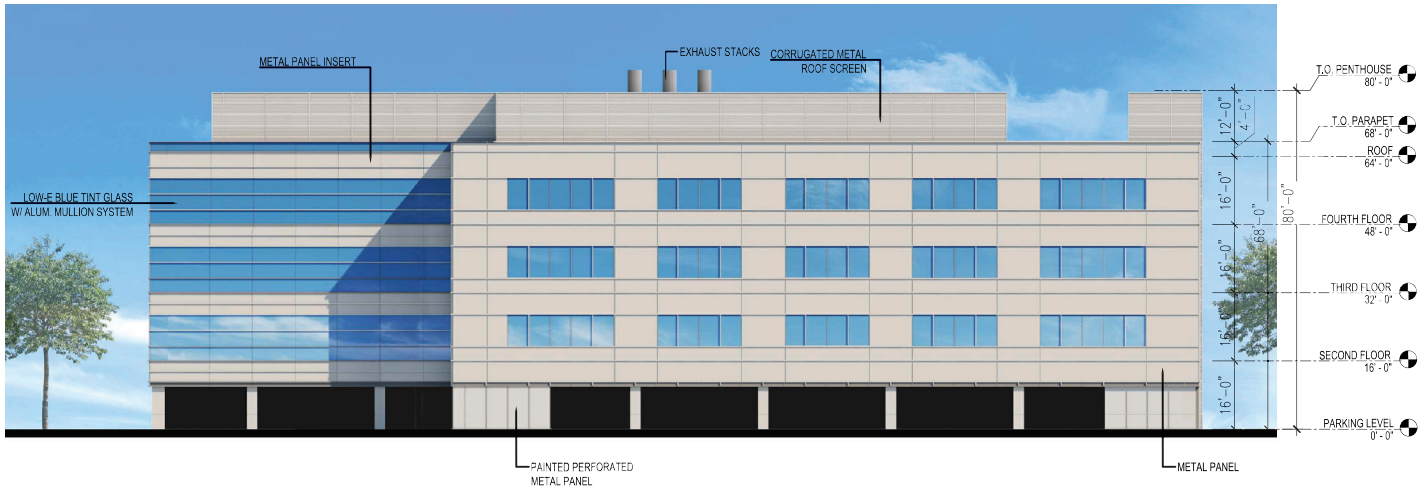
FIGURE 3-13

NOT TO SCALE

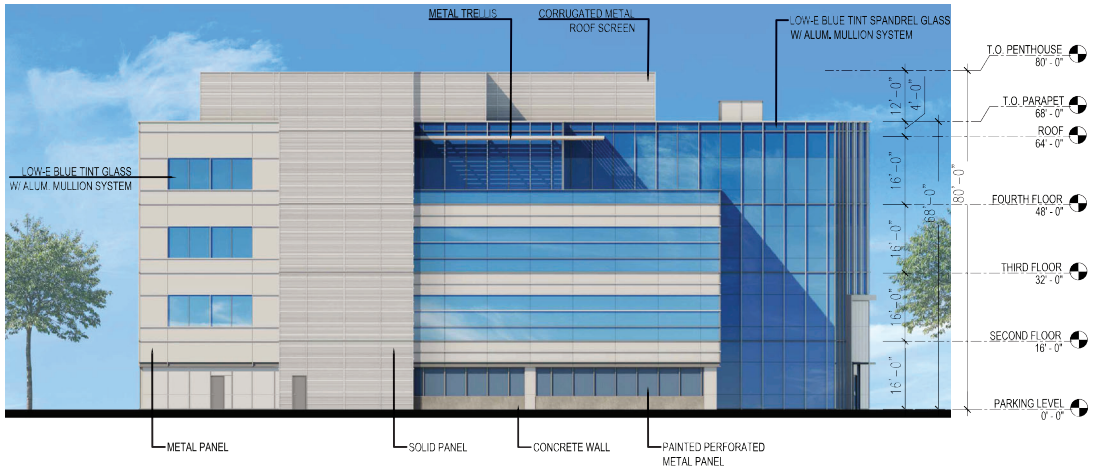
388 Vintage Park Drive Project EIR
Proposed Conceptual Building Elevations - East and North

SOURCES: DES; HELIOS; STEELWAVE, October 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-13.ai (12/7/2021)



West Elevation



South Elevation

LSA

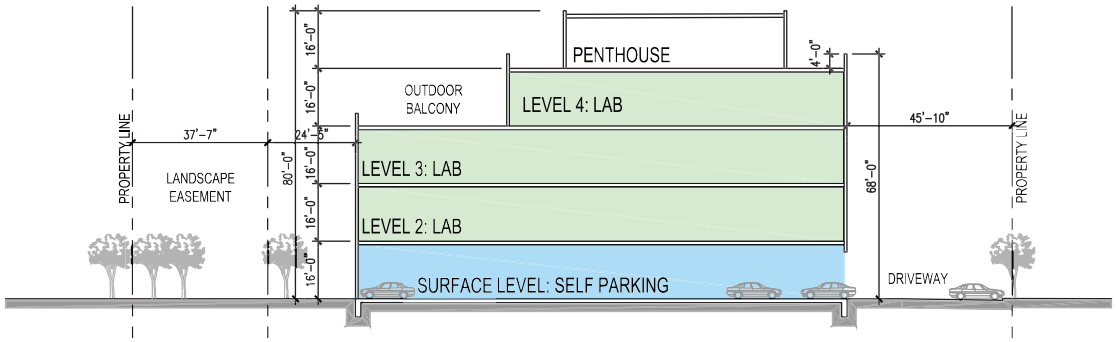
FIGURE 3-14

NOT TO SCALE

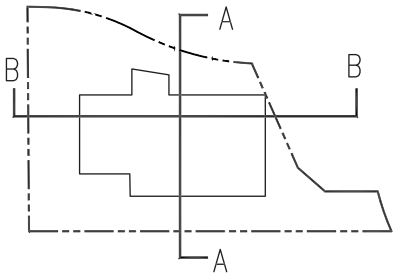
388 Vintage Park Drive Project EIR
Proposed Conceptual Building Elevations - South and West

SOURCES: DES; HELIOS; STEELWAVE, October 2021

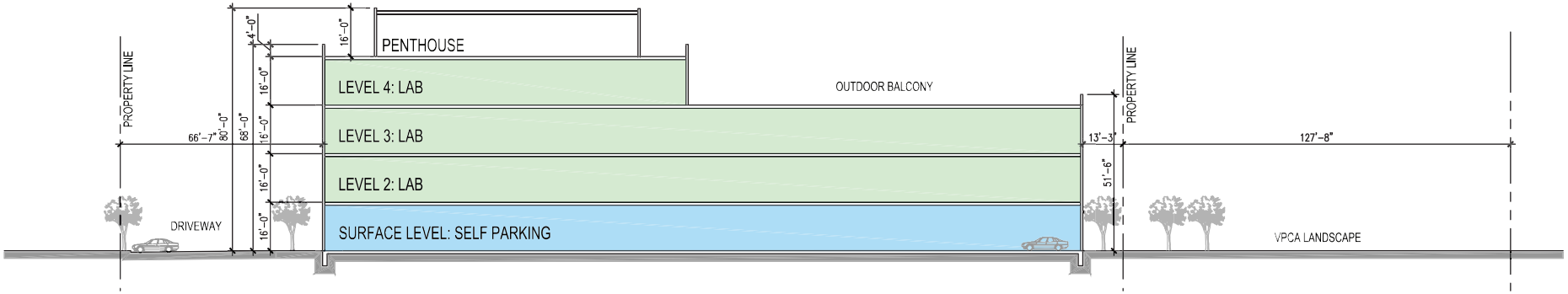
P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-14.ai (12/7/2021)



West to East Section - Section A



Key Plan



North to South Section - Section B

LSA

FIGURE 3-15

388 Vintage Park Drive Project EIR
Proposed Conceptual Building Sections

SOURCES: DES; HELIOS; STEELWAVE, April 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 3-15.ai (7/29/2021)

3.3.3 Access, Circulation, and Parking

Pedestrian access to the proposed building would be provided by both Vintage Park Drive and Chess Drive, including new sidewalks connecting to Chess Drive and a landscaped area between the Vintage Park Drive right-of-way and the proposed building. Vehicular access to the project site would be provided by the existing driveways along Vintage Park Drive and Chess Drive.

The ground level of the proposed building would include a garage that would contain 102 parking spaces and would be accessed from a driveway at the northwest corner of the proposed building. An additional 108 surface parking spaces would be provided along the northern and western boundaries of the project site, for a total of 210 parking spaces. A total of 16 motorcycle parking spaces would be provided throughout the project site. A total of 20 bicycle parking spaces would be provided in a long-term storage room in the parking garage. A loading dock that would be able to accommodate a WB-40 truck[6] would be provided at the northwestern corner of the building. An additional loading zone for package drop off is proposed at the main entry.

3.3.4 Utilities, Infrastructure, and Easements

The project site is in an urban area with existing utilities and infrastructure. The proposed project would be required to install the following utility connections to the satisfaction of the applicable utility providers: water, wastewater, stormwater drainage, power, and telecommunication services. The proposed building would also include a pad and an enclosure for a future tenant-supplied generator. The generator would be south of the proposed building in a perforated metal panel enclosure approximately 14 feet in height.[7]

The existing project site includes 76,196 square feet of impervious surfaces and approximately 19,735 square feet of pervious surfaces. The proposed project would result in a net increase in impervious surface coverage of 3,052 square feet (4 percent increase) compared to existing conditions for a total of 79,248 square feet of impervious surface and 16,683 square feet of pervious surface.

The on-site stormwater would be collected, treated per C.3 treatment methods, and conveyed to the City's storm drain main within Vintage Park Drive. The proposed project would decrease the amount of landscaping and pervious area on-site as noted above; therefore, the amount of storm water run-off from the site is expected to increase.

The proposed project would include energy efficient components and design features to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence. Specifically, measures to achieve this standard would include exterior Low-E glazing to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for electric vehicle charging, and enhanced indoor air quality strategies including advanced ventilation.

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6 A WB-40 truck is defined as a medium- to large-sized box truck or tractor trailer with a 40-inch wheelbase.

7 For the purposes of this analysis, this generator is assumed to be a 250-kilowatt diesel generator that would operate 52 hours per year (1 hour per week) for testing and would be used for emergency backup only.

The proposed building would be generally within the same footprint as the existing building. The project sponsor is currently pursuing establishment of a new no-build and maintenance easement with the VPCA.

3.3.5 Demolition, Grading, and Construction

The proposed project would include demolition of the existing building and surface parking lots on the project site. Construction debris, such as old foundations, pavements, and structures, would be collected and hauled off site for disposal. Approximately 180 tons of demolition waste would be generated by the proposed project and approximately 75 percent of those materials would be recycled.[8] Other than spoils, excavated soils would be balanced on the project site and, therefore, would not require substantial import or export. The project sponsor proposes to implement displacement auger cast piles or vibrated-in H steel piles for foundation installation; pile driving is not proposed.[9]

If approved, construction of the proposed project is anticipated to begin in spring 2022. Overall, construction of the proposed project is anticipated to last approximately 17 months and is anticipated to be fully operational and occupied by late 2023.

3.4 PERMITS AND APPROVALS

A number of permits and approvals would be required to allow development of the proposed project. As lead agency for consideration of the proposed project, the City would be responsible for the majority of the approvals required for project development. Other agencies also may have some authority related to the proposed project and its approvals. Table 3.1 provides a list of required permits and approvals, including the discretionary actions described above, that the City and other agencies may require.

In addition, development of the proposed project, if approved, would be subject to the City's standard Conditions of Approval (COA) for all Major Use Permits. Applicable COAs are identified in Chapter 4 of this EIR.

[8] Tubbs, Curtis, Project Construction Contractor. 2021. Personal communication with Peter Banzhaf, Project Sponsor. June 30.

[9] Rockridge Geotechnical. 2021a. 388 Vintage Parkway Geotechnical Consultation regarding H-piles. June 30.

Table 3.1: Anticipated Permits and Approvals for Project Implementation

Lead Agency	Permit/Approval
City of Foster City	● Environmental Review ● General Development Plan Amendment/Rezoning ● Specific Development Plan/Use Permit ● Use Permit Modification (Amendments to Vintage Park Design Guidelines) ● Encroachment Permit ● Transportation Permit
Responsible Agencies	
Bay Area Air Quality Management District (BAAQMD)	● Permits for on-site generators, boilers, and other utility equipment
California Department of Transportation (Caltrans)	● Review of traffic circulation effects and consultation on potential traffic improvements that may affect State highway facilities, ramps, and intersections
California Regional Water Quality Control Board/San Mateo Countywide Water Pollution Prevention Program	● Compliance with National Pollutant Discharge Elimination System (NPDES) Construction General Permit and Municipal Regional Permit
City/County Association of Governments	● Review of potential effects on Routes of Regional Significance
San Mateo County Environmental Health Division	● Review of on-site generators
San Mateo County Transportation Authority	● Review of potential effect on public transit
San Mateo Consolidated Fire Department	● Commercial Site Plan review ● Emergency Vehicle Access approval
San Mateo Union High School District	● School District Certification of School Impact Fees
San Mateo-Foster City School District	● School District Certification of School Impact Fees
City of San Mateo	● Encroachment Permit for potential traffic control on Chess Drive ● Industrial Waste Discharge Permit
Recology	● Approval of on-site trash/recyclables access

Source: Compiled by LSA (2021).

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4.0 SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter contains an analysis of each potentially significant environmental impact that has been identified for the proposed 388 Vintage Park Drive Project (project). The following (1) identifies how a determination of significance is made, (2) identifies the environmental issues addressed in this chapter, (3) describes the context for the evaluation of cumulative effects, (4) lists the format of the topical issue section, and (5) provides an evaluation of each potentially significant impact in Sections 4.1 through 4.9. The analysis in this section was prepared in compliance with the City of Foster City/Estero Municipal Improvement District Environmental Review Guidelines.[1]

DETERMINATION OF SIGNIFICANCE

The California Environmental Quality Act (CEQA) defines a significant effect as a substantial, or potentially substantial, adverse change in the environment.[2] The "environment" means the physical conditions, which exist in the area including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. Each impact evaluation in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant. These criteria of significance are based on the *State CEQA Guidelines* and applicable City of Foster City (City) policies. In determining whether a project's impacts are significant, an Environmental Impact Report (EIR) ordinarily compares the environmental conditions with the proposed project with existing environmental conditions, which are referred as the "baseline" for the impact analysis. This EIR compares the potential environmental impacts of the proposed project with the baseline environmental conditions in existence at the time that the Notice of Preparation was published on July 21, 2021.

ISSUES ADDRESSED IN THE DRAFT EIR

Sections 4.1 through 4.9 of this chapter describe the environmental setting of the project as evaluated in the EIR and the impacts that are expected to result from implementation of the proposed project. Mitigation measures are proposed to reduce potential impacts, where appropriate. The following environmental issues are addressed in this chapter:

4.1 Land Use and Planning
4.2 Aesthetics
4.3 Transportation
4.4 Air Quality
4.5 Greenhouse Gas Emissions
4.6 Noise
4.7 Hazards and Hazardous Materials
4.8 Public Services
4.9 Utilities and Service Systems

[1] Foster City, City of/Estero Municipal Improvement District. 2007. *Environmental Review Guidelines.* October 1.

[2] Public Resources Code Section 21068.

Preliminary analysis provided in the Initial Study (Appendix B) determined that development of the proposed project would not result in significant impacts to the following environmental topics: agriculture and forestry resources, biological resources, cultural resources, energy, geology and soils, hydrology and water quality, mineral resources, population and housing, recreation, tribal cultural resources, and wildfire. Consequently, these issues are not examined in this EIR and are briefly addressed in Chapter 6, Other CEQA Considerations.

Section 4.1 discusses consistency with the City's land use and planning policies, including the General Plan and the Zoning Ordinance. It should be noted that, according to CEQA, policy conflicts do not, in and of themselves, constitute a significant environmental impact. Policy conflicts are considered to be environmental impacts only when they would result in direct physical impacts or where those conflicts relate to avoiding or mitigating environmental impacts. Any such associated physical environmental impacts are discussed in the Initial Study or appropriate sections of this EIR. City decision-makers will further evaluate zoning compliance and other policy considerations when considering approval of the proposed project.

As previously discussed in Chapter 3, Project Description, the proposed project would be required to comply with all applicable standard Conditions of Approval (COA) required by the City for approval of Major Use Permits. Applicable COAs are identified in the regulatory setting section for each environmental topic evaluated in this chapter. The proposed project has been determined to have less than significant impacts in a number of topic areas within the Initial Study (refer to Appendix B and Chapter 6, Other CEQA Considerations, of the EIR) and in Chapter 4 of this EIR, based on compliance with the City's COAs. Applicable COAs will be included in the Mitigation Monitoring and Reporting Program that the City adopted if the EIR is certified.

CUMULATIVE ANALYSIS CONTEXT

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound to increase other environmental impacts." Section 15130 of the *State CEQA Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.

The methodology used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. CEQA requires that cumulative impacts be discussed using either a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. This project-specific analysis employs both the list-based and projection-based approaches, depending on which approach best suits the resource topic being analyzed.

The cumulative land use assumptions include projections for year 2050 by the Association of Bay Area Governments and the Metropolitan Transportation Commission with refinements to reflect development projects under construction, approved, and pending in Foster City.

The cumulative context for land use development project effects is typically localized within the immediate vicinity of the project site or at the neighborhood level. Cumulative development in the project vicinity (within an approximately 0.25 mile radius of the project site) includes the projects listed in Table 4.A. These projects are either projects for which the City has a project application on file or projects that have been entitled but were not yet operational at the time that the EIR analysis began (July 2021). Refer to the appropriate discussion in each topical section for further discussion of the cumulative assumptions relevant to each issue topic.

Table 4.A: Cumulative Projects in the Vicinity of the Project Site

Project/Location	Project Description	Project Status
Pilgrim Triton	Addition of 332 dwelling units, 10,000 square feet of retail, and 35,000 square feet of office	Under Construction
Gilead Campus Master Plan	Addition of 1,044,000 square feet of office	Under Construction
Foster Square Adjacent to the Foster City Government Center	Development of 152 senior housing units, 90 assisted living units, and 30,000 square feet of retail	Completed
Lincoln Centre 200–850 Lincoln Centre Drive	Development of 388,000 square feet of office and 166,000 square feet of laboratory space	Completed
Charter Square School 1050 Shell Boulevard	Demolition of 58,000 square feet of retail use and construction of a new school with an enrollment capacity of 600 students	Completed
Chess Hatch Master Plan	Demolition of 190,000 square feet of office and replacement with 80,000 square feet of new office	Entitlements Approved
Metro Center Hotel southwest corner of Metro Center Boulevard and Shell Boulevard intersection	Development of an 83,000-square-foot hotel	Entitlements Approved

Source: Compiled by Fehr & Peers (2021).

FORMAT OF ISSUE SECTIONS

The environmental topical section is composed of two primary parts: (1) Setting, and (2) Impacts and Mitigation Measures. The following provides an overview of the general organization and the information provided in the two parts:

- **Setting**. The Setting section for the environmental topic generally provides a description of the applicable physical setting (e.g., existing land uses, existing traffic conditions) for the project site and its surroundings in Foster City. It also provides an overview of regulatory considerations, including COAs, that are applicable to each specific environmental topic.

- **Impacts and Mitigation Measures**. The Impacts and Mitigation Measures section for each environmental topic presents a discussion of the potential impacts that could result from

implementation of the proposed project. The section begins with the criteria of significance, which are the thresholds used to determine whether an impact is potentially significant. The latter part of this section presents the potential impacts from the proposed project and mitigation measures, if necessary. The potential impacts of the proposed project are organized into separate categories based on the criteria listed in each topical section. Cumulative impacts are also addressed.

Impacts are numbered and shown in bold type, and the corresponding mitigation measures are numbered and indented. Impacts and mitigation measures are numbered consecutively and begin with an acronymic or abbreviated reference to the impact section (e.g., TRA). The following symbol is used for individual topics:

LU Land Use and Planning
AES Aesthetics
TRA Transportation
AIR Air Quality
GHG Greenhouse Gas Emissions
NOI Noise
HAZ Hazards and Hazardous Materials
PUB Public Services
UTL Utilities and Service Systems

Impacts are also categorized by type of impact, as follows: Less Than Significant (LTS), Significant (S), and Significant Unavoidable (SU). These notations indicate the significance of the impact with and without mitigation.

4.1 LAND USE AND PLANNING

This section describes the existing land uses on and around the project site. It identifies potential impacts related to land use and planning that could result from development of the proposed project and recommends mitigation measures, as appropriate.

This section also evaluates the proposed project's consistency with applicable planning policies. While this section contains a discussion of the consistency of the project with relevant land use policies, policy conflicts, in and of themselves, do not constitute a significant environmental impact. Policy conflicts are considered to be environmental impacts when they would result in direct physical impacts. Therefore, this section discusses land use policies for informational purposes only. All other associated physical impacts are discussed in this EIR in specific topical sections, as applicable.

4.1.1 Setting

The following subsections provide an overview of the project location, the project site, and adjacent existing and planned land uses.

4.1.1.1 Overview

Foster City is 19.8 square miles and is on the western shore of San Francisco Bay in San Mateo County. The city is bordered to the north and east by the San Francisco Bay, to the south by Redwood City and Belmont, and to the west by San Mateo. Foster City is a "Planned Community", constructed and implemented through an organized program of development.[1] The city was originally designed in the 1960s as a suburban community with a clear community center and an industrial base to support required services.[2] The city was constructed on reclaimed marshlands, previously used for dairy farming, and salt ponds. Development within the city is guided and limited by the natural, often water-oriented, constraints of the filled marshlands.

The project site is in northeast Foster City and is approximately 23 miles south of San Francisco, as shown in Figure 3-1 in Section 3, Project Description. The project site is within Foster City's Vintage Park neighborhood, which is characterized by a mix of pharmaceutical, office, research and development, light industrial, hotel, restaurants, and retail land uses generally north and east of State Route 92 (SR-92) adjacent to existing light industrial development in Foster City and existing residential development in the city of San Mateo. Regional access to the project site is provided by SR-92 via the on- and off-ramps along Foster City Boulevard to the east.

4.1.1.2 Existing Land Uses

The generally rectangular project site is 2.2 acres in size. The project site is currently developed with a single-story, 10,120-square-foot vacant commercial building on the southern half of the site. The site has a number of existing easements, including an approximately 35-foot-wide Estero Municipal Improvement District landscape and sanitary sewer easement along the eastern boundary, a 25-foot emergency vehicle access easement that runs along the western and northern borders, a 12-foot

1 Foster City, City of. History of Foster City. Website: https://www.fostercity.org/community/page/history-foster-city (accessed August 2021).

2 Foster City, City of. 2016a. *Foster City General Plan*. February.

public utility easement along the southern border, and a 10-foot Pacific Gas & Electric Company easement in the northeastern corner. The remainder of the project site contains a 178-space surface parking lot with ornamental vegetation. Ingress and egress to the project site is provided by a driveway at the northeast corner of the project site along Vintage Park Drive and another driveway at the southwest corner of the site along Chess Drive. Existing site conditions are depicted in Figures 3-3 and 3-5 in Chapter 3, Project Description.

4.1.1.3 Existing Land Uses in the Vicinity of the Project Site

The following provides a description of the existing land uses within the vicinity of the project site. Land uses adjacent to the site are generally identified in Figure 3-2 in Chapter 3, Project Description and are depicted in Figures 3-6 and 3-7.

Areas to the North. The project site is bordered immediately to the north by a commercial building and associated parking lot. Further north of the project site is the Gilead Sciences, Inc. (Gilead) campus, Vintage Park Drive, and light industrial and commercial uses. The Gilead campus consists of 23 life sciences and research and development (R&D) buildings, as well as associated parking and open space. San Francisco Bay is approximately 1 mile north of the project site.

Areas to the East. The project site is bounded to the east by Vintage Park Drive, which is a four-lane divided roadway in the vicinity of the project site. Across Vintage Park Drive are a mix of commercial uses, including office buildings, a hotel, restaurants, and SR-92, which forms the eastern and southern boundary of the Vintage Park neighborhood. Land uses across SR-92 include a mix of commercial and multifamily residential in the vicinity of Metro Center Boulevard, commercial along Foster City Boulevard, and single-family and open-space uses adjacent to the Foster City Lagoon.

Areas to the South. The project site is bounded immediately to the south by a small park owned by the Vintage Park Community Association (VPCA) and Chess Drive. This park includes a walking path, small plaza with benches, and landscaped drainage areas and a small lawn. Across Chess Drive are a mix of commercial uses, including retail, restaurants, and a hotel. As described above, SR-92 also forms the southern boundary of the Vintage Park neighborhood. Land uses south of SR-92 generally consist of commercial office buildings along Metro Center Boulevard, past which are single- and multifamily residential uses on either side of Seal Slough.

Areas to the West. The project site is bordered to the west by The Home Depot commercial warehouse building and surface parking lot. A mix of commercial uses, including a hotel and office buildings, and multifamily residential buildings, are farther west along Bridgepoint Circle. Seal Slough, which runs from north to south in the vicinity of the project site, is farther west. Single-family residential is generally the dominant use west of the slough, with some institutional and open space uses. The western edge of the project site is also the city limit of Foster City, and uses to the west are within the city of San Mateo.

4.1.1.4 Regulatory Framework

Planning and regulatory considerations that guide land use and development on the project site include the Foster City General Plan (General Plan), the Foster City Zoning Ordinance (Zoning Ordinance), Vintage Park Design Guidelines, and the San Mateo County Comprehensive Airport Land

Use Plan (CLUP). Brief descriptions of applicable land use and planning policies and requirements are provided below.

Foster City General Plan. The General Plan, adopted in February 2016,[3] is a document for the City of Foster City (City) that establishes the basis for zoning regulations and provides guidance in the evaluation of development proposals. The General Plan consists of six elements that cover issues including land use and circulation, housing, parks and open space, noise, safety, and conservation. A discussion of the applicable General Plan policies is included in Table 4.1.A at the end of this section.

The project site is currently designated Research/Office Park, which is intended for areas containing office, research and development, and manufacturing establishments with operations that are clean and quiet.

Foster City Zoning Ordinance. The Zoning Ordinance consists of a zoning map that delineates the boundaries of zoning designations within the city and regulations that govern the use of land and placement of buildings and improvements within the various classes of districts. The purpose of the Zoning Ordinance is to protect the health, safety, peace, morals, comfort, convenience, and general welfare of the people of Foster City, and to serve as an instrument for implementation of the General Plan. The project site is within the Commercial Mix District/Planned Development Combining District (C-M/PD). The C-M zoning allows for mixed commercial uses such as retail. However, the C-M district is required to be used only in conjunction with the combining zone PD, which is designed to accommodate various types of development and allow flexibility of design that is in accordance with the objectives and spirit of the General Plan. The current zoning for the project site is established by the Vintage Park General Development Plan (GDP), which designates the project site as a restaurant site.

Applications for development in a PD district must include a GDP/Rezoning that establishes design standards, development parameters, and traditional zoning standards such as site layout, setbacks, lot sizes, and building heights, among others. If and when the GDP is approved, it becomes part of the zoning map of the city.

Following approval of a GDP Amendment/Rezoning, the City requires the submittal and approval of a Specific Development Plan (SDP)/Use Permit before building permits may be issued and construction of any buildings or improvements can take place. Site development, building design, and architecture, as well as the details of any improvements, are considered as part of this approval. If the project is phased, the SDP can address the specific phase for which development approval is requested. An SDP/Use Permit in a PD district includes architectural review and requires approval by the Foster City Planning Commission.

Vintage Park Design Guidelines. The objectives of the Vintage Park Design Guidelines, updated in January 2021, are to (1) Maintain over the long-term the design quality and compatibility of all projects within the park; (2) Attract employers to Foster City by providing a high quality office/research/industrial park; (3) Enhance Foster City's image as a master planned, well-designed City; 4) Create a quality mixed-use development within a "park-like" setting that organizes the

[3] Foster City, City of. 2016a. *Foster City General Plan*. February.

mixed land uses, is economically feasible and shares uses of recreational amenities and parking; (5) Develop a unified hierarchy of site functions and elements including circulation systems, recreational amenities, public and private access and landscape forms and details; and (6) Design a development that is not only unique and supportive of a wide range of uses, but is also flexible enough to accommodate changing market demands and unforeseen desires.

All development projects within the Vintage Park area are subject to VPCA review and approval for conformance to the Vintage Park Design Guidelines. The Vintage Park Design Guidelines Land Use Map designates the project site as "restaurant."

San Mateo County Comprehensive Airport Land Use Plan. The project site is within the vicinity of two airports governed by the CLUP. The CLUP is a tool used by airport land use commissions to fulfill their purpose of promoting airport/land use compatibility. The purpose of the CLUP is to provide for the orderly growth of each public airport and surrounding areas and to safeguard the general welfare of the inhabitants within the vicinity of the airport and the public in general. The CLUP focuses on the following three major concerns (1) aircraft noise impact reduction, (2) the safety of persons on the ground and in aircraft flight, and (3) height restrictions and airspace protection.[4] The project site is within the airport influence areas of both San Francisco International and San Carlos airports. The following discusses the airport land use plan for each respective airport and applicable policies.

San Carlos Airport. The project site is 3.7 miles north of San Carlos Airport. Although the project site is outside of the mapped height restriction for this airport, it is within Area A of the Airport Influence Area (AIA).[5] This boundary defines the area within which a real estate disclosure notice must be provided to a buyer or lessee of property within the boundary, regarding the proximity of the nearby airport.

The project site is outside of the 65 decibel (db) Community Noise Equivalent Level (CNEL) aircraft contour for San Carlos Airport. This noise contour is used by the Airport Land Use Commission as the threshold for triggering review and evaluation of proposed land use policy actions in proximity to the airport with respect to noise impacts.

The Airport Land Use Commission recognizes certain types of land uses as hazards to air navigation in the vicinity of the San Carlos Airport. These land uses include any of the following:

- Any use that would direct a steady or flashing light toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in straight final approach toward a landing

[4] City/County Association of Governments of San Mateo County. 1996. San Mateo County Comprehensive Airport Land Use Plan, 1996. November 14.
City/County Association of Governments of San Mateo County. 2012, Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. October.

[5] Ibid.

- Any use that would cause sunlight to be reflected toward an aircraft in an initial straight climb following takeoff or toward an aircraft engaged in straight final approach toward a landing
- Any use that would generate smoke or rising columns of air
- Any use that would attract large concentrations of birds within approach/climb-out areas
- Any use that would generate electrical interference that may interfere with aircraft communications or aircraft instrumentation

San Francisco International Airport. The project site is approximately 5.5 miles southeast of San Francisco International Airport (SFO), within both Area A and Area B of the SFO AIA. Area A encompasses all of San Mateo County, above which aircraft fly to and from SFO at least once per week at altitudes of 10,000 feet or less above mean sea level. Area A denotes the Real Estate Disclosure Area, within which the real estate disclosure requirements of State law apply. The law requires that the following statement must be included in the notice of intention to offer the property for sale:

> ***Notice of Airport in Vicinity.*** *This property is presently located in the vicinity of an airport, within what is known as an airport influence area. For that reason, the property may be subject to some of the annoyances or inconveniences associated with proximity to airport operations (for example: noise, vibration, or odors). Individual sensitivities to those annoyances can vary from person to person. You may wish to consider what airport annoyances, if any, are associated with the property before you complete your purchase and determine whether they are acceptable to you.*

Area B is referred to as the Policy/Project Referral Area. The Airport Land Use Commission has statutory duties to review land use policy actions proposed in Area B. Such actions include General Plan updates and amendments, new Specific Plans, and changes to local zoning ordinances.

Additionally, although the project site is not within exclusion/restriction zones established by Part 77 airspace protection criteria, it is within the far southeast side of the 14 Code of Federal Regulations Part 77 Airport Imaginary Surfaces. The highest obstruction permitted within the project site associated with the approach surface is 499 feet.

4.1.2 Impacts and Mitigation Measures

The following section provides a discussion of impacts related to land use that could result from development of the proposed project. The section begins with the criteria of significance, establishing the thresholds to determine whether an impact is significant. The latter part of this section describes the land use impacts from the proposed project and recommends mitigation measures, if required.

As noted earlier, conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves; as such, the proposed project's consistency with applicable policies is discussed separately from the physical land use impacts associated with the proposed project. A policy inconsistency is considered to be a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect, and it is anticipated that the inconsistency would result in a significant adverse physical impact when evaluated against the established significance criteria. The proposed project's consistency with regional policies related to physical environmental topics (e.g., air quality, transportation, and noise) is analyzed and discussed in those topical sections of the EIR.

4.1.2.1 Significance Criteria

Implementation of the proposed project would have a significant impact on the environment related to land use and planning if it would:

1) Physically divide an established community; or

2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.1.2.2 Project Impacts

The following describes the potential impacts related to land use that could result from implementation of the proposed project.

1) Physically divide an established community

The division of an established community would typically involve the construction of a barrier to neighborhood access (such as a new freeway segment) or the removal of a means of access (such as a bridge or roadway) that would impair mobility within an existing community, or between a community and outlying areas. For example, the construction of an Interstate highway through an existing community could constrain travel from one side of the community to another. Similarly, such construction could also impair travel to areas outside of the community.

The project site is in northeastern Foster City. Development surrounds the project site by on all four sides, including a commercial building within an associated parking lot to the north, Vintage Park Drive to the east, Chess Drive to the south, and a Home Depot warehouse and associated parking lot to the west. The proposed project would result in the redevelopment of the project site with a 120,164-square-foot, four-story office building that would include three levels of occupied space above a single level of ground-floor parking. The proposed project would not alter the through travel lanes on Vintage Park Drive or Chess Drive and would not impede access to the site or to adjacent uses. Access to the project site would be from the existing driveways along Vintage Park Drive and Chess Drive. Construction of the proposed project would not limit pedestrian, bicycle, or vehicular connections to the site. Therefore, implementation of the project would not result in the physical division of the adjacent surrounding areas or any other established community; this impact would be less than significant.

2) Cause a significant environmental impact due to a land use policy conflict

The following sections addresses the proposed project's compliance and compatibility with the applicable land use regulations of the General Plan, the Zoning Ordinance, and the CLUP.

Foster City General Plan. Potential conflicts with specific General Plan policies are discussed below and evaluated in detail in Table 4.1.A. Only policies adopted for the purpose of avoiding or mitigating an environmental effect and that relate directly to development of the project site are discussed. As indicated in the discussion below, the proposed project would generally be consistent with the General Plan. However, City decision-makers will evaluate the proposed project in the context of the General Plan, and as part of the development review process for the proposed project will consider potential policy conflicts. Consideration of the consistency with General Plan policies would take place independently of the environmental review process.

As shown on Table 4.1.A, the proposed project would be generally consistent with the land use and planning related policies outlined in the City's General Plan and no adverse physical environmental effects would result from any policy inconsistencies; therefore, the project would result in a less than significant impact related to consistency with General Plan policies adopted to mitigate adverse environmental impacts.

Foster City Zoning Ordinance. The project site is within the C-M/PD zoning district. As discussed above, new development with a C-M/PD zoning designation requires approval of a GDP Amendment/Rezoning. The PD combining district is intended to accommodate flexibility in application of zoning and design standards in exchange for high quality of design. These standards must be determined to be in accordance with "the objectives and spirit of the General Plan."

The Zoning Ordinance establishes that zoning, design, and development standards customized to individual project sites are to be established via the GDP/Rezoning described above. According to the Code, the GDP shall become a part of the zoning map of the city only when approved by the Planning Commission and the City Council. This process ensures that the rezoning process and changes to development standards at the project site are reviewed for conformance with the General Plan, including all land use policies aimed at targeting the environment and reducing environmental impacts.

The project sponsor has acted in compliance with the GDP process. On July 16, 2021, the project sponsor submitted applications for both GDP/Rezoning and Environmental Assessment related to the proposed project. Because the Vintage Park GDP currently in place specifies the subject lot as a restaurant site, an amendment to the GDP is required to allow the construction of an R&D/office building. As a result of regulations built into the C-M/PD zoning district (i.e., zoning and design standards that must conform with the intent of the General Plan), and the project sponsor's compliance with those regulations, the proposed rezoning and development standard changes do not represent significant land use policy impacts.

San Mateo Consolidated Airport Land Use Plan. The project site is outside the mapped height restriction areas for San Carlos Airport and SFO. Building heights are therefore not regulated by

the CLUP. Implementation of the COA detailed in Section 4.2, Aesthetics, would reduce potential impacts associated with increased light and glare. It is anticipated that construction materials would be similar to other buildings in the area and would not create conflict with design restrictions regarding light or direction of light towards aircraft, nor would any uses generate conflicts with the CLUP. The project site is also outside the 65 dB CNEL aircraft noise contour for SFO, which is used as the threshold for triggering review and evaluation of proposed land use policy actions near the airport with respect to noise impacts. Therefore, the proposed project is consistent with the CLUP.

As required, the real estate transfer documents distributed to prospective buyers or lessees at the project site would disclose that the property is within Area A of San Carlos Airport AIA and in Areas A and B of the SFO AIA, and that the site may be subject to aircraft overflight. In addition, the Airport Land Use Commission recommends that project sponsors submit Federal Aviation Administration (FAA) Form 7460-1, "Notice of Proposed Construction or Alteration" to the FAA Western-Pacific Regional Office in Southern California. FAA staff would use this form to determine if the proposed structure (up to about 80 feet in height) would affect the Class B airspace for SFO. However, as the highest obstruction permitted within the project site associated with the approach surface is 499 feet, the height of the proposed structures is significantly lower and would not impact the airspace.

4.1.2.3 Cumulative Impacts

The cumulative geographic context for land use, planning, and policy considerations for development consists of the project site in addition to the surrounding areas and uses abutting the project site.

The area surrounding the project site is largely developed with a mix of commercial, hotel and infrastructure uses, as well as the VPCA park. Development of the project would increase the intensity of office use development within the vicinity of the project site; however, other development projects are dispersed geographically throughout the city and would not combine with the project to result in cumulative impacts related to physical division of an established community.

In addition, all other cumulative development has been, or will be, subject to development guidance contained within the General Plan, prescribed by zoning and other applicable land use plans to avoid conflicting with plans adopted to avoid or mitigate environmental effects. Based on the information in this land use section and for the reasons summarized above, development of the project would not contribute to any significant adverse cumulative land use impacts when considered together with other cumulative development.

Table 4.1.A: Relationship of Proposed Project to Relevant Plans and Policies

Goal/Policy/ Program Number	Policy Summary	Project's Relationship to Policy
Foster City General Plan – Land Use and Circulation Element		
Goal LUC-B	Ensure high quality site planning and architectural design for all new development, renovation or remodeling and require property maintenance to maintain the long- term health, safety, appearance and welfare of the community.	*Consistent.* The proposed site design and circulation are analyzed in Section 4.3, Transportation, of this EIR. The site plan and architectural design have been, and will continue to be, the subject of detailed review by City staff and the Planning Commission to ensure a high-quality design, as described in Section 17.58 of the Foster City Municipal Code. The proposed project would be subject to design review at the time of Specific Development Plan/Use Permit approval.
Policy LUC-B-1	The City will establish a continuing program of civic beautification, tree planting, maintenance of homes and streets, and other measures which will promote an aesthetically desirable environment in order that neighborhood areas appear attractive both within and without. The City will use a design review process (called Architectural Review) whereby the design of most public and private development proposals, including those for individual residences, are subject to review and approval by the City. The primary objective of this review is to preserve the character of the neighborhood and community regarding appropriate and acceptable design for property improvements. Design review shall address, among other things, the following issues: (a) Preservation of the architectural character and scale of neighborhoods; (b) That the development is well designed in and of itself, and in relation to surrounding properties; (c) Preservation of waterfront views; (d) Minimizing impacts on the privacy and access to sunlight of adjacent properties; (e) Minimizing impacts due to excessive noise or undue glare; (f) Screening of unsightly uses including trash, loading docks/ areas, roof top equipment, and special ventilating systems; (g) Use of setbacks, open space and landscaping, (h) Exterior colors and materials.	*Consistent*. Refer to Policy LUC-A-2, above. As discussed in Section 4.2, Aesthetics, of this EIR, implementation of COA 8.2would reduce potential impacts associated with light and glare.
Goal LUC-C	Maintain land designated for a variety of residential, commercial, light industrial, recreational and public institutional purposes which: (1) provide a mix of housing types, densities and tenure; (2) ensure that a variety of commercial and industrial goods, services and employment opportunities are available in Foster City; (3) offer a range of recreational and public facilities to meet the needs Foster City's residents; and (4) maintain availability of commercial and retail services.	*Consistent.* The proposed project would consist of the redevelopment of the project site with a commercial office building. The proposed project would help further this goal by ensuring a variety of employment options near commercial service centers and residential uses.

Table 4.1.A: Relationship of Proposed Project to Relevant Plans and Policies

Goal/Policy/ Program Number	Policy Summary	Project's Relationship to Policy
Policy LUC-C-1	The Planned Development zoning designation may be applied to any designated multi-family, commercial or industrial site to allow a mixed-use project, subject to the following standards: …(c) advertising or identification signs are limited in size and number, and regulated by a project-specific sign program; (d) any residences located in the development can be protected by landscaping, open spaces, or other design features from the noise and traffic generated by commercial establishments; (e) off-street parking for residents, employees, and customers is provides in accordance with the Municipal Code; and (f) an adequate amount of open space for use by any residents of the project is provided. Such an open space area should be protected to provide a private area for residents.	*Partially Consistent.* The project site is within the Commercial Mix District/Planned Development (C-M/PD) zone. Project signage would be subject to design review prior to issuance of a Specific Development Plan/Use Permit, as described in Section 17.36 of the Foster City Municipal Code. As described in Section 4.3, Transportation, of this EIR, the proposed project would not provide adequate parking for employees, as required by the municipal code. The proposed project does not include a residential component.
Policy LUC-C-11	Permitted land uses on vacant sites should be compatible with the existing uses of land surrounding the vacant parcel, environmental characteristics of the site, the capacity of public facilities, streets and infrastructure serving the site, and the need to maintain a balance between residential, commercial, and public land uses	*Consistent.* The project site is currently developed with an existing vacant commercial building; the proposed project is largely compatible with the surrounding office buildings, mixed commercial uses, and parking lots that surround the project site. Additionally, the proposed project would include a landscape buffer between the proposed building and the VPCA park, and would not cast any new shadows on the park. The proposed project considers these existing land uses, as well as the environmental characteristics of the site. More information is provided in Section 4.2, Aesthetics; Section 4.7, Hazards and Hazardous Materials; Section 4.8, Public Services; and Section 4.9, Utilities and Service Systems, of this EIR; and Section 3.7, Geology and Soils; and Section 3.10, Hydrology and Water Quality, of the Initial Study (available in Appendix B).
Goal LUC-D	Ensure that commercial and industrial uses are safe and strictly control any industrial by-products, odors or emissions which may adversely affect the health or safety of Foster City residents or workers and the overall environment in Foster City, as provided in Chapter 17.68, General Performance Standards of the Foster City Municipal Code.	*Consistent.* The proposed project would be subject to design review prior to the Specific Development Plan/Use Permit approval, as described in Foster City Municipal Code Section 17.58. As described in Section 4.4, Air Quality, of this EIR, the proposed project would not result in any odors or emissions that would adversely affect the health or safety of Foster City residents or workers.
Policy LUC-D-9	The City will use a design review process for commercial and industrial projects to ensure that basic land uses, density, access, internal circulation, visual characteristics, noise, odors, fire hazards, vibrations, smoke, discharge of wastes and nighttime lighting do not negatively affect adjacent or nearby residential land uses.	*Consistent.* The proposed project would be subject to design review prior to the Specific Development Plan/Use Permit approval, as described in Foster City Municipal Code Section 17.58. More information is provided in Section 4.2, Aesthetics; Section 4.3, Transportation; Section 4.4, Air Quality; Section 4.6, Noise and Vibration; Section 4.7, Hazards and Hazardous Materials; and Section 4.8, Public Services, of this EIR.

Table 4.1.A: Relationship of Proposed Project to Relevant Plans and Policies

Goal/Policy/ Program Number	Policy Summary	Project's Relationship to Policy
Policy LUC-D-10	Industrial and commercial activities shall conform to the City's performance standards for noise, odor, vibration, glare, smoke, and waste. New or modified industrial or commercial developments shall be required to provide information on noise, odors, wastes, by-products, and the storage and handling of hazardous materials to the City prior to the issuance of a Certificate of Occupancy.	*Consistent*. This EIR addresses potential noise and vibration impacts in Section 4.6, Noise, odor and smoke in Section 4.4, Air Quality, glare in Section 4.2, Aesthetics, and waste in Sections 4.7, Hazards and Hazardous Materials and Section 4.9, Utilities and Service Systems. Impacts were determined to be less than significant with implementation of the City's standard COAs and recommended mitigation measures.
Policy LUC-H-1	Encourage sustainability efforts of residents and business owners. Foster the use of technology to improve sustainability, e.g., irrigation controls coordinated with the weather, sustainable remodeling guidelines for homes, use of recycled water for landscaping irrigation, infrastructure for electric vehicles, etc.	*Consistent.* This EIR analyzes the proposed project's sustainability features in Section 4.5, Greenhouse Gas Emissions. The proposed project was found to include sufficient sustainability measures and be consistent with the City's Climate Action Plan.
Policy LUC-K-2	Ensure that all new buildings, whether free-standing or multi-building developments and all expansions of existing buildings demonstrate consistency with the infrastructure of the Estero Municipal Improvement District and the City, including sewer, storm sewer, parks/recreation facilities, and street system capacity.	*Consistent*. This EIR addresses potential impacts related to the need for new infrastructure, or expansion of existing infrastructure, in Section 4.9, Utilities and Service Systems. Impacts were determined to be less than significant, and existing infrastructure was found to be adequate.
Foster City General Plan – Parks and Open Space Element		
Policy PC-18	Consider the impact of new development on sunlight to existing public open spaces.	*Consistent.* This EIR addresses potential shadow impacts in Section 4.2, Aesthetics. Impacts were determined to be less than significant and no mitigation measures are required.
Program PC-n	Review all new development or improvement proposals through the City of Foster City's architectural review process for: (1) Impacts on access to sunlight on public areas; (2) provision of street furniture and attractive landscaping in public open spaces; and (3) impacts on waterfront views.	*Consistent.* Refer to Policy PC-18. Additionally, the proposed project would provide landscaping throughout the project site that would complement the existing landscaping along Vintage Park Drive and the VPCA park adjacent to the site. The project site does not include any waterfront views.
Foster City General Plan – Noise Element		
Goal N-A	Assure the appropriateness of new development with the noise environment of Foster City and establish mitigation measures for any changes in land use as are reasonably necessary to assure compatibility with the surrounding area.	*Consistent.* This EIR addresses potential noise impacts resulting from construction and operation of the proposed project. Impacts were determined to be less than significant with implementation of the City's standards COAs and recommended mitigation measures.
Policy N-13	The City will apply the quantitative noise ordinance standards (Chapter 17.68, General Performance Standards) throughout the City.	*Consistent*. Refer to Goal N-A.

Table 4.1.A: Relationship of Proposed Project to Relevant Plans and Policies

Goal/Policy/ Program Number	Policy Summary	Project's Relationship to Policy
Foster City General Plan – Local Hazard Mitigation Plan & Safety Element		
Program S-A-3-b	The City will study the adequacy of water storage and/or supply facilities.	*Consistent*. This EIR address potential water supply impacts in Section 4.9, Utilities and Service Systems. Impacts were determined to be less than significant.
Program S-B-1-d	The City will provide adequate personnel, training, and equipment to support the provision of police services.	*Consistent*. This EIR addresses potential impacts related to the provision of police services in Section 4.8, Public Services. Impacts were determined to be less than significant.
Program S-C-4-a	The City will review proposals for new and modified buildings to ensure that fire safety provisions are included as required by the most current uniform codes and local regulations.	*Consistent.* This EIR addresses potential impacts related to emergency access in Section 4.3, Transportation, and potential impacts related to the provision of fire services in Section 4.8, Public Services. Impacts were determined to be less than significant.
Foster City General Plan – Conservation Element		
Goal C-A	Protect and conserve wildlife habitat, energy resources, land resources, air quality, and the quality and quantity of water resources.	*Consistent.* The Initial Study prepared for the proposed project addresses potential impacts related to wildlife habitat and energy resources, which were determined to be less than significant with implementation of standard mitigation measures and COAs. This EIR addresses air quality impacts in Section 4.4, Air Quality, and impacts related to water resources in Section 4.9, Utilities and Service Systems.
Policy C-1	Conserve water resources in existing and new development.	*Consistent.* Refer to Program S-A-3-b.
Policy C-3	Reduce the impact of development on local air quality.	*Consistent.* This EIR addresses potential air quality impacts in Section 4.4, Air Quality. Impacts were determined to be less than significant with implementation of the City's standard COAs.
Policy C-4	Promote energy conservation in new and existing development.	*Consistent.* Refer to Policy LUC-H-1.
Policy C-5	Reduce the generation of solid waste through recycling and other methods.	*Consistent.* This EIR addresses potential impacts related to solid waste in Section 4.9, Utilities and Service Systems. Impacts were determined to be less than significant.

Source: Foster City General Plan, February 2016. Compiled by LSA, 2021.
City = City of Foster City
COA = Condition of Approval
EIR = Environmental Impact Report
VPCA = Vintage Park Community Association

4.2 AESTHETICS

This section assesses the effects of the proposed project on visual resources in the vicinity of the project site. The proposed project's consistency with Foster City General Plan policies relevant to aesthetics, shade, and shadow are considered, as well as compliance with relevant requirements and standards set forth in the Foster City Zoning Code. This analysis also considers the visual quality of the project site and its surroundings, in addition to public views of the project site. It identifies standard Conditions of Approval (COAs) and/or mitigation measures to reduce or avoid potentially significant impacts are identified, where appropriate.

4.2.1 Setting

This section describes the existing visual character of the project site, the areas immediately surrounding the project site, and the area in the general vicinity of the project site.

4.2.1.1 Local Context

As described in Section 4.1, Land Use and Planning, Foster City is a "Planned Community" constructed and implemented by an organized program of development. The 2.2-acre project site is within Vintage Park, a 132-acre, mixed-use development integrated into a planned framework of open space systems that collectively create a park-like setting. All buildings within Vintage Park are between 1 to 10 stories in height, with the tallest buildings situated within the Gilead campus. Circulation in the surrounding area is provided by two- to four-lane roadways and boulevards. The boulevards serving the project vicinity do not provide on-street parking; parking is instead provided in surface lots and, in the case of the Gilead campus, low-rise parking structures. The landscaped areas and trees that line the edges and medians of the boulevards in the area, as well as the Gilead campus open space, are the defining visual features of Vintage Park.

4.2.1.2 Existing Visual Character of the Project Site

As described in Section 3, Project Description, the project site is generally level and developed with a vacant restaurant building and surface parking lot. The approximately 10,120-square-foot building is a single story in height and was constructed in approximately 1990. Landscaping on the project site consists of the approximately 35-foot-wide Estero Municipal Improvement District (EMID) landscape and sanitary sewer easement that includes landscaping and sidewalks and approximately 55 mature trees. When viewed from the Vintage Park Drive and Chess Drive intersection, the existing building appears to be situated in a park due to the presence of the Vintage Park Community Association (VPCA) park immediately to the south, the landscaped EMID easement to the east, and the mature street trees along both roadways.

4.2.1.3 Visual Character of the Surrounding Area

The visual character of the surrounding area is of the planned built environment that defines this area of Foster City. The project area is characterized by relatively dense urban development with planned open spaces and landscaping and little undeveloped land in the vicinity. San Francisco Bay is less than 1 mile north of the project site. The prevailing level topography of the area, existing buildings, and mature vegetation between properties prevent expansive vistas or perspectives, including views of the Bay. There are no scenic vistas or natural landscapes visible from the project

site or from neighboring properties in the project vicinity. There are also no State-designated scenic highways or potentially eligible scenic highways near the project site.[1]

Buildings near the project site range from 1 to 10 stories, although a 4-lane boulevard, large surface parking lots, and landscaped areas provide separation between adjacent buildings. The nearby buildings were built in the latter half of the 20th century and beginning of the 21st century and display architecture typical of office and retail buildings of those eras. The following describes the visual character project site surroundings. Figures 3-6 and 3-7, in Chapter 3, Project Description, include photos of surrounding land uses; refer to Figure 3-4 for photo viewpoint locations.

- **North of the Project Site.** Directly north of the project site is a commercial office building and its associated surface parking lot (Photo 3; Figure 3-6). The office building is 2 stories in height and clad in gray stucco with windows that generally extend the length of the building on both floors. Further north is the Gilead campus, which is made up of buildings of varying heights, up to 10 stories, with siding that consists of stucco, metal cladding, and large floor-to-ceiling windows.

- **East of the Project Site.** The commercial office buildings east of the project site across Vintage Park Drive are similar to those north of the site (Photo 4; Figure 3-6). While these buildings are generally smaller (i.e., one to two stories in height), they use similar gray stucco siding and windows that extend nearly the length of the building. A six-story hotel, currently occupied by the Crowne Plaza Hotel, is visible in the distance to the east. The hotel has a typical design with beige stucco and individual windows for each room.

- **South of the Project Site.** The small VPCA park south of the site and within the same block is characterized by landscaped areas including trees and shrubs, a small lawn, and small plaza with benches (Photo 5; Figure 3-7). The retail building across Chess Drive south of the project site resembles a typical retail building designed and built in the early 21st century. A mix of beige and gray stucco combined with metal cladding and pedestrian-height ground floor windows makes up the siding of the building. Metal awnings, setback portions of the building, and changes in color serve to break up the massing and provide visual interest.

- **West of the Project Site.** Directly west of the project site is a home improvement warehouse/ retail store (Home Depot) and its associated surface parking lot (Photo 6; Figure 3-7). The building is a single-story, double-height, warehouse-style building clad in stucco of various colors, including beige and red. An outdoor nursery contained by a black metal fence with brick columns in also visible from the project site.

4.2.1.4 Views from the Project Site

Due to the presence of mature trees, landscaping, and buildings that line the boundary of the project site and the prevailing flatness of the project site and surrounding area, views from within the project site into the surrounding area are limited to adjacent buildings and related features.

[1] California Department of Transportation. 2019. California State Scenic Highway System Map. Available online at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed August 2021).

- **Views to the North.** Views to the north of the project site are restricted by mature vegetation within and on the northern border of the project site and the existing buildings to the north. Portions of mid-rise office buildings within the Gilead campus are visible to the north. These buildings vary in design, from buildings made up of mostly glass siding to those with a mix of stucco and windows.

- **Views to the East.** Views to the east are largely restricted by existing vegetation both on the project site and on the opposite side of Vintage Park Drive. The office buildings east of the project site are partially visible through this vegetation, as well as a small portion of the Crowne Plaza Hotel.

- **Views to the South.** Views to the south of the project site are largely restricted by the existing mature vegetation within the VPCA park. The retail buildings south of Chess Drive are visible from the project site as well as Vintage Park Drive, which becomes elevated south of the intersection with Chess Drive to cross over State Route 92 (SR-92). Partial views of the high-rise buildings along Metro Center Boulevard are also available from the project site.

- **Views to the West.** The Home Depot warehouse and its associated surface parking lot and commercial and residential uses along Chess Drive Bridgepoint Circle are visible with some screening from existing vegetation on the project site. Overhead power lines and a support within the median along Chess Drive are also visible to the west.

4.2.1.5 Views of the Project Site

The flat, tree-lined project site is only visible from a few surrounding vantage points. From public viewpoints along Vintage Park Drive and Chess Drive, notable features such as the existing building and mature vegetation are visible to passing motorists and pedestrians. As described above, Vintage Park Drive south of the project site rises in elevation to cross over SR-92. Therefore, motorists traveling northbound between Metro Center Boulevard and Chess Drive have partial views of the project site. Views of the project site are available from surrounding buildings as well, including office buildings to the east, the upper floors of the nearby hotels to the south and east, and the taller buildings within the Gilead campus. However, the majority of these views would be obstructed by existing development and vegetation immediately surrounding the project site.

4.2.1.6 Existing Shading and Shadows

As shown in the shadow diagrams provided later in this section (Figures 4.2-1 through 4.2-3), existing shadows cast by the existing single-story building on the site are limited to the project site during all times of the year. Surrounding development casts shadows primarily onto adjacent surface parking lots, roadways, and immediately adjacent buildings. Buildings, however, are generally separated by intervening surface parking lots and roadways such that most buildings in the vicinity remain free from shadows from adjacent structures during any point of the year, even during the Winter Solstice (generally around December 21), when the days are shorter and longer shadows are cast throughout the day.

4.2.1.7 Regulatory Framework

The following discusses applicable standards and policies related to aesthetics and shadow, including those from the City of Foster City's (City) General Plan, Zoning Ordinance, Vintage Park Design Guidelines, and Foster City COAs.

Foster City General Plan. The Foster City General Plan addresses aesthetics and shadow in the Land Use and Circulation Element. The following policies are applicable to the proposed project.

- **Policy LUC-A-2: Preservation of Views.** The City will use the design review process to balance the ability of the property owner to improve/expand their property with the desire of the owners of neighboring Bayfront or waterfront houses to continue to enjoy views of the San Francisco Bay or the Foster City Lagoon.

- **Policy LUC-B-1: City Approach to Design (Architectural) Review.** The City will establish a continuing program of civic beautification, tree planting, maintenance of homes and streets, and other measures which will promote an aesthetically desirable environment in order that neighborhood areas appear attractive both within and without. The City will use a design review process (called Architectural Review) whereby the design of most public and private development proposals, including those for individual residences, are subject to review and approval by the City. The primary objective of this review is to preserve the character of the neighborhood and community regarding appropriate and acceptable design for property improvements. Design review shall address, among other things, the following issues: (a) preservation of the architectural character and scale of neighborhoods; (b) that the development is well designed in and of itself, and in relation to surrounding properties; (c) preservation of waterfront views; (d) minimizing impacts on the privacy and access to sunlight of adjacent properties; (e) minimizing impacts due to excessive noise or undue glare; (f) screening of unsightly uses including trash, loading docks/areas, roof top equipment, and special ventilating systems; (g) use of setbacks, open space, and landscaping; and (h) exterior colors and materials.

- **Policy LUC-D-9: Design Review of Commercial and Industrial Projects.** The City will use a design review process for commercial and industrial projects to ensure that basic land uses, density, access, internal circulation, visual characteristics, noise, odors, fire hazards, vibrations, smoke, discharge of wastes and nighttime lighting do not negatively affect adjacent or nearby residential land uses.

- **Policy LUC-D-10: Health and Safety Performance Standards for Industrial and Commercial Activities.** Industrial and commercial activities shall conform to the City's performance standards for noise, odor, vibration, glare, smoke, and waste. New or modified industrial or commercial developments shall be required to provide information on noise, odors, wastes, by-products, and the storage and handling of hazardous materials to the City prior to the issuance of a Certificate of Occupancy.

Foster City Municipal Code. The Foster City Municipal Code contains the following regulations related to aesthetics and visual impacts.

- **Chapter 17.36 Planned Development (PD) Combining District.** The project site is zoned C-M/PD, meaning it is subject to the PD combining district regulations described in Chapter 17.36 of the Foster City Municipal Code. Although the PD combining district regulations permit project-specific design guidelines and standards to be applied as part of the approval process, Chapter 17.36.070 also describes general development criteria for projects within a PD combining district zone. Among other criteria, these guidelines include the undergrounding of utility lines where feasible, the designing of structures in harmony with existing topography and vegetation, and the minimizing of detraction of scenic and visual quality of the City.

- **Chapter 17.58.010.B Architectural Control and Supervision.** Projects involving construction of new buildings are subject to architectural review by the Planning Commission. Chapter 17.58 of the Foster City Municipal Code establishes procedures and criteria for review of proposed structures, buildings, and improvements to real property and modifications to such that are necessary in order to meet the following objectives:

    1. To preserve the architectural character and scale of the neighborhoods and community;

    2. To assure that development is well designed, in and of itself and in relation to surrounding properties, including that the height, façade length, roof form, colors, materials, and architectural details of a proposed building should be compatible with the height, façade length, roof form, colors, materials, and architectural details of buildings in the immediate vicinity;

    3. To prevent the erection of structures, additions, or alterations or other property improvements which significantly impact the privacy of adjacent properties; cause a significant diminution of sunlight to the interior of an adjacent building or to the exterior of adjacent properties; cause undue glare or noise impacts to adjacent properties; and significantly block or limit existing views from the interior and exterior of adjacent properties, and that individual rights are weighed against the needs and requirements of the community;

    4. To assure that developments enhance their sites and are harmonious with the highest standards of improvements in the surrounding area;

    5. To promote and protect the health, safety and general welfare of the City;

    6. To preserve views of and from the lagoons and waterways which provide a visual connecting link for adjacent lots and developments;

    7. To enhance the residential and business property values within the City and in neighborhoods surrounding new or modified development;

8. To assure that each new development is designed to best comply with the intent and purpose of the zone in which the property is located and with the general plan of the City;

9. To encourage the maintenance, repair, replacement or improvement of surrounding properties.

- **Chapter 17.68.080. General Performance Standards: Glare.** No direct or reflected glare, whether produced by floodlight, high-temperature processes such as combustion or welding, or other processes, so as to be visible from any boundary line of property on which the same is produced, shall be permitted. Sky-reflected glare from buildings or portions thereof shall be so controlled by such reasonable means as are practical to the end that the sky-reflected glare will not inconvenience or annoy persons or interfere with the use and enjoyment of property in and about the area where it occurs.

Vintage Park Design Guidelines. The objectives of the Vintage Park Design Guidelines, updated in January 2021, are to (1) Maintain over the long term the design quality and compatibility of all projects within the park; (2) Attract employers to Foster City by providing a high quality office/research/industrial park; (3) Enhance Foster City's image as a master planned, well-designed city; (4) Create a quality mixed-use development within a "park-like" setting that organizes the mixed land uses, is economically feasible and shares uses of recreational amenities and parking; (5) Develop a unified hierarchy of site functions and elements including circulation systems, recreational amenities, public and private access and landscape forms and details; and (6) Design a development that is not only unique and supportive of a wide range of uses, but is also flexible enough to accommodate changing market demands and unforeseen desires.

Section 5.2, Building Height, of the Vintage Park Design Guidelines requires that development projects consider the shadow impacts of taller buildings on adjacent buildings.

Foster City Standard Conditions of Approval. The City has adopted COAs for development projects. The following COA related to aesthetics would apply to the proposed project.

- **COA 8.2:** An exterior lighting plan including fixture and standard design, coverage and intensity, to be reviewed and approved by the Community Development Department and the Police Department. In its review of the lighting plan, the City shall ensure that any outdoor night lighting proposed for the project is downward-facing, and shielded so as to minimize nighttime glare and lessen impacts to neighboring properties. The City shall also ensure that all development plans for the proposed project conform to the performance standards provided under Section 17.68.080 of the Foster City Municipal Code.

4.2.2 Impacts and Mitigation Measures

This section provides an assessment of the potential impacts related to aesthetics that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this section presents potential impacts associated with implementation of the proposed project and identifies applicable COAs and/or mitigation measures, as appropriate.

4.2.2.1 Significance Criteria

Implementation of the proposed project would have a significant effect on visual resources if it would:

1) Have a substantial adverse effect on a scenic vista;

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway;

3) Conflict with applicable zoning and other regulations governing scenic quality;

4) Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or

5) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

The Foster City General Plan contains policies that seek to preserve access to sunlight on public spaces, as described in Section 4.2.1.1, above. The significance criteria related to shadows above reflects the intent of these policies. This criterion is based on similar thresholds used for previous projects in the city. The remaining thresholds of significance are based on Appendix G of the *State CEQA Guidelines*. Applicable thresholds of local significance from the City's Environmental Review Guidelines[2] are discussed in this section as well.

4.2.2.2 Project Impacts

The following describes the potential impacts related to aesthetics that could result from implementation of the proposed project.

1) Have a substantial adverse effect on a scenic vista

A scenic vista is generally defined as a publicly accessible vantage point providing expansive or panoramic views. The city is generally flat with limited scenic vistas from public vantage points. Existing topography, combined with infrastructure (e.g., roadways), mature vegetation, and existing development in the vicinity of the project site limit visual access from all but a few public viewpoints. Scenic vistas within the city generally consist of views of the San Bruno Hills to the west and views of the various water bodies surrounding and within the city, including Belmont Slough, Seal Slough, the Central Lake, and San Francisco Bay. The Foster City Environmental Review Guidelines specify that projects that eliminate or significantly alter public views of San Francisco Bay shall be considered to have a potentially significant impact on the environment.

As described in Section 4.2.1.4, above, views from the project and the surrounding area are generally obstructed by existing development and mature vegetation. The project site is near Seal

[2] Foster City, City of/Estero Municipal Improvement District. 2007. *Environmental Review Guidelines.* October 1.

Slough; however, scenic views of this water body and others in the city are generally only available from streets or sites directly adjacent to these features. Similarly, views of the San Bruno Hills from public viewpoints near the project site are blocked by existing development and mature vegetation. Therefore, the proposed project would not block or substantially alter any existing scenic vistas on or adjacent to the project site, and this impact would be less than significant.

2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway

As described in Section 4.2.1.3, there are no State scenic highways near the project site. A segment of SR-92 is identified as an eligible State scenic highway; however, this section consists of the portion between State Route 1 near Half Moon Bay to Interstate 280, which is more than 5 miles away from the project. Therefore, the proposed project would not result in the damage of trees, rock outcroppings, or historic buildings within view of a State scenic highway, and there would be no impact.

3) Conflict with applicable zoning and other regulations governing scenic quality

Development of the proposed project would change the visual character of the project site and its surroundings. However, these changes would not be incompatible with the character of the surrounding area, nor would the visual quality of the project site be degraded, as further discussed below. The project site currently consists of a vacant, one-story building that is underutilized and minimally maintained.

The proposed project would result in the demolition of the existing building on the project site and the construction of a 120,164-square-foot, 4-story (68-foot-tall, excluding a mechanical penthouse and associated equipment that would reach 80 feet) office building. The proposed project would retain the existing vegetation along Vintage Park Drive and replace existing trees on the project site, both of which would screen the proposed building.

As noted above, the tallest portion of the building would be approximately 80 feet tall, although the roofline would only reach 68 feet. Although the proposed building would be taller than the buildings immediately adjacent to it, the four-story building would not be out of scale with nearby developments within Vintage Park, particularly the buildings within the Gilead campus and hotels to the south and east, which are up to 10 stories in height.

As discussed in Section 4.1, Land Use and Planning, the project site is within the C-M/PD zoning district. New development with a C-M/PD zoning designation requires approval of a General Development Plan (GDP) Amendment/Rezoning. Applications for development in a PD district must include a GDP/Rezoning that establishes design standards, development parameters, and traditional zoning standards such as site layout, setbacks, lot sizes, and building heights, among others. The proposed project would be subject to the City's Design Review process, which ensures that proposed projects meet all guidelines, standards, and objectives related to building design and aesthetics, prior to final approval. Also evaluated in this process is a proposed project design's compatibility with or appropriateness for its surroundings. Design review also includes assessment of the compatibility of the development project with surrounding properties in terms of colors,

materials, architectural details, façade lengths, and roof forms. Conformance with this process and review of the requested GDP Amendment/Rezoning would ensure that the project would not substantially degrade the existing visual character or quality of the site or surroundings and would be consistent with community standards. Therefore, the proposed project would have a less-than-significant impact related to visual character.

4) Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space

Development of the proposed project would result in the construction of a four-story office building that would be up to 68 feet at the roofline and 80 feet in height to the top of the mechanical penthouse. The closest public or quasi-public space to the project site is the VPCA park abutting the southern boundary of the project site. The proposed building would shift the daily pattern of shade and shadow cast from the project site, as discussed below and depicted in Figures 4.2-1 through 4.2-3.

Figures 4.2-1 through 4.2-3 show the shadows that the proposed building would cast by at various points throughout the year, including the summer and winter solstices (approximately June 21 and December 21, respectively) and the spring/fall equinoxes (represented on March 21). As shown, new shadows cast by the project would be limited towards the north, east, and west of the site during all points of the year, during all times of the day. The proposed project would not result in any new shade or shadow cast to the south on the adjacent VPCA park. The shadows that would be cast would primarily fall on the surface parking lots for the proposed building and the adjacent Home Depot warehouse. On December 21, the date that usually has the longest shadows of the year, shadows would reach a portion of the Home Depot building and surface parking lot for the office building north of the project site. However, shadows would shift throughout the day, and no existing building or other use would be shaded for a substantial length of time. Therefore, no sensitive uses such as residences, parks, or schools would be affected by shade and shadows cast by the proposed project, and this impact would be less than significant.

5) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

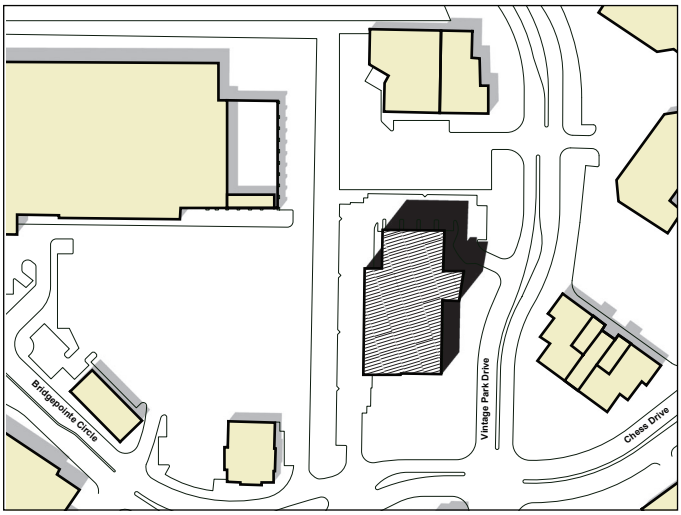
The proposed project would create additional sources of glare in the vicinity of the project site. The project site currently contains reflective surfaces on the existing building, but because it is currently vacant, it does not contain any light-emitting sources. The proposed project would result in the construction of a new building that would be up to 68 feet at the roofline and a maximum of 80 feet in height including rooftop appurtenances. As discussed above, the proposed building would be at least partially visible from various points in the city. The public (i.e., pedestrians and motorists) could experience some degree of glare due to sunlight reflecting off the façade of the building. In the evening hours, the lights used to illuminate the building would add new sources of light to the vicinity of the project site and to the nighttime skyline. However, implementation of COA 8.2 would require an exterior Lighting Plan and building materials to be reviewed and approved by the City to ensure that light and glare impacts would be reduced. Therefore, the proposed project would result in less than significant impacts related to light and glare.

4.2.2.3 Cumulative Impacts

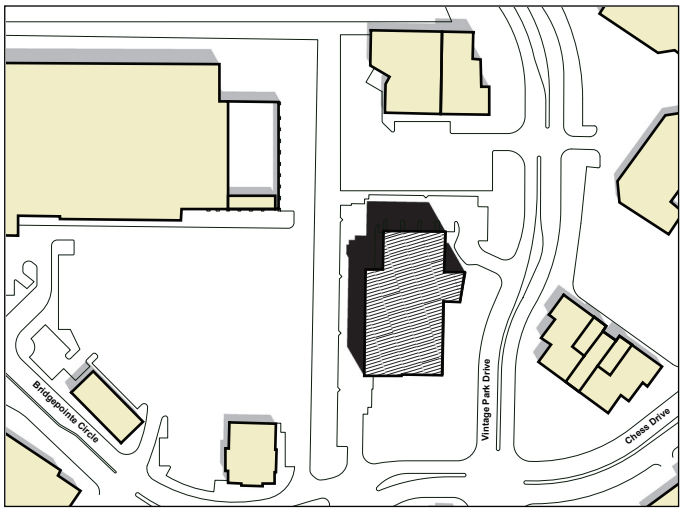
The geographic area considered for the aesthetic cumulative analysis includes the area near the project site, including the parcels with Vintage Park. This area was defined because it includes the project site and the immediately surrounding neighborhood. There are no significant development projects included in this area. The proposed project would not substantially alter existing views of scenic vistas within the vicinity of the project site, including views of the distant hills or mountain ranges. Therefore, the project would not make a considerable contribution to cumulative impacts related to the obstruction of scenic vistas in Foster City.

The project is consistent with the City's General Plan Land Use Designation for the site, and together with the majority of past, present, existing, pending, and reasonably foreseeable future development projects, is subject to the City's design review process. The objective of the City's design review process is to preserve the character of the neighborhood and community. The design review process is intended to assure the proposed development is well designed, in and of itself, and in relation to surrounding properties, and that individual rights are weighed against the needs and requirements of the community. The project site is also surrounded by developed, urban properties of similar land use and development patterns; therefore, the construction of the project would not adversely alter the visual character of the area.

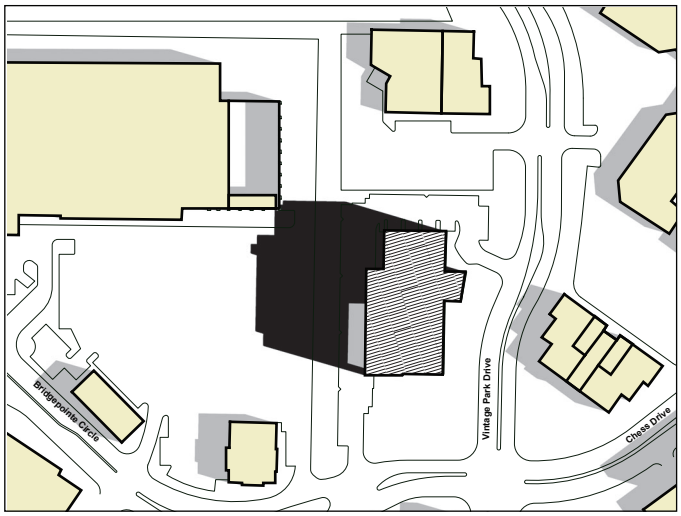
Increased shadows cast by the proposed project and cumulative developments would be limited to the immediate surroundings of each development site, and no cumulative projects are close enough to the site to cast new shadows that would combine with the proposed project's new shadows and affect nearby parks or open spaces. Although the proposed project and future projects in the vicinity of the site could increase light and glare in the area, the City's General Plan includes goals and policies related to design review, which govern the use of reflective materials and outdoor lighting. With implementation of COA 8.2, the project would not make a considerable contribution to cumulative light and glare impacts. Therefore, the proposed project would not combine with, or add to, any potential adverse aesthetic impacts that may be associated with other cumulative development.



March 21, 3:00 pm PDT



March 21, 12:00 noon PDT



March 21, 9:00 am PDT

LSA

Project

Existing Shadow

New Project Shadow

Note: Shadows on September 21 (fall equinox) are virtually identical to shadows at the same time on March 21 (spring equinox).

N

0 100 200

FEET

SOURCE: Environmental Vision, 7/9/2021

FIGURE 4.2-1

388 Vintage Park Drive Project EIR

Proposed Project Shadow Patterns - March 21

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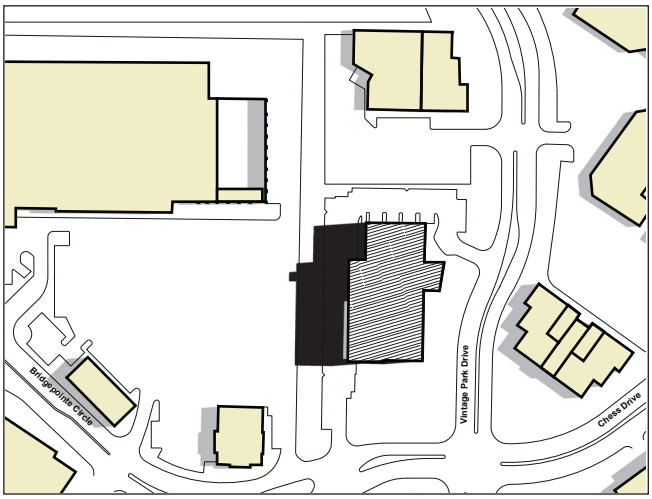
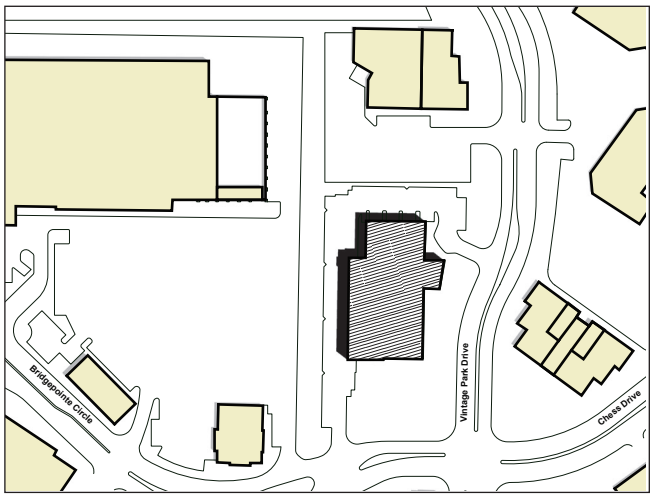
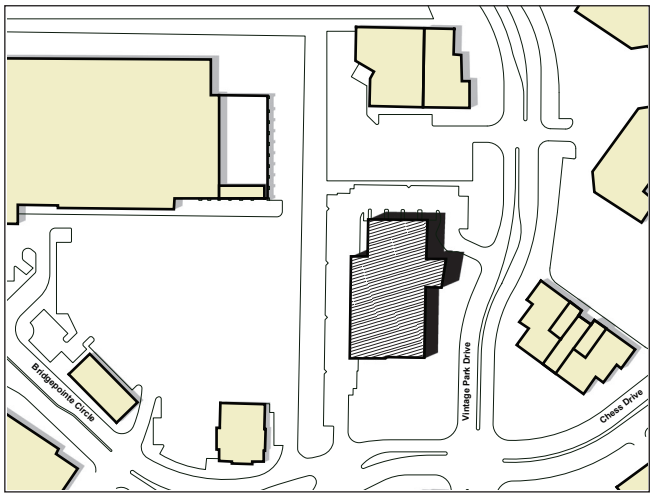


June 21, 9:00 am PDT



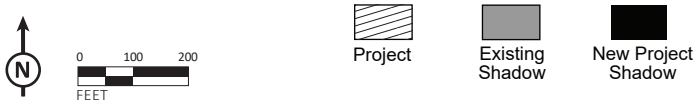
June 21, 12:00 noon PDT



June 21, 3:00 pm PDT

LSA

FIGURE 4.2-2

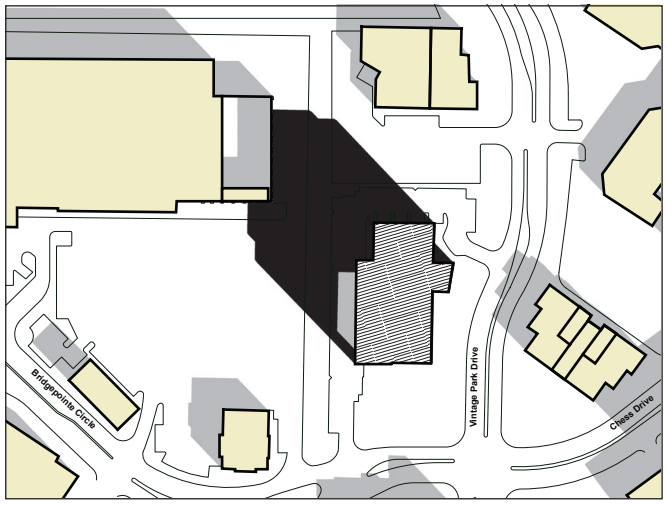


388 Vintage Park Drive Project EIR

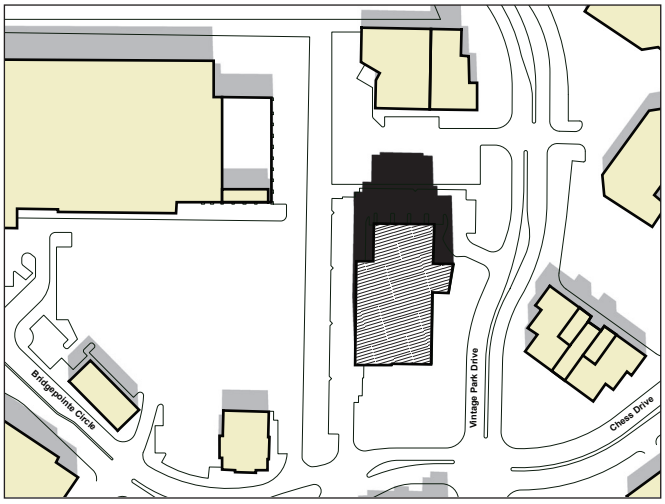
Proposed Project Shadow Patterns - June 21

SOURCE: Environmental Vision, 7/9/2021

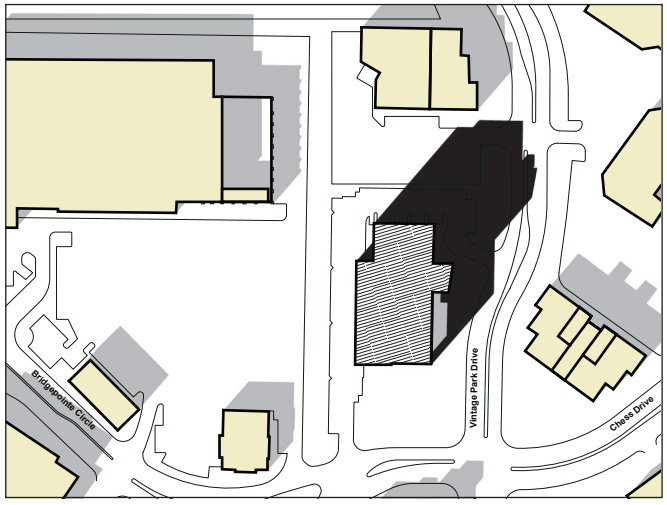
P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 4.2-2.ai (8/16/2021)



December 21, 9:00 am PDT



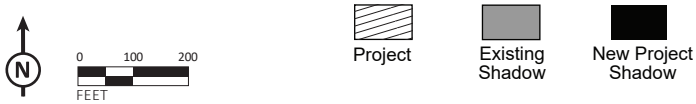
December 21, 12:00 noon PDT



December 21, 3:00 pm PDT

LSA

FIGURE 4.2-3



388 Vintage Park Drive Project EIR

Proposed Project Shadow Patterns - December 21

SOURCE: Environmental Vision, 7/9/2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 4.2-3.ai (8/16/2021)

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4.3 TRANSPORTATION

This section discusses the results of the Transportation Impact Assessment (TIA)[1] conducted for the proposed project and included in Appendix C. Specifically, this section describes existing and future transportation and circulation within the study area, describes the analysis methodology and regulatory framework, identifies potential transportation-related impacts of the proposed project, and identifies the applicable standard Conditions of Approval and recommended mitigation measures for identified significant impacts. Topics evaluated in the analysis include an assessment of vehicle miles traveled (VMT), site access and circulation, driveway site distance and vehicle queuing, and hazards and emergency vehicle access. Additionally, for informational purposes, this section includes an assessment of vehicle level of service (LOS) for consistency with General Plan Policy LUC-F-1, as well as an assessment of vehicle parking and loading.

Up until July 1, 2020, roadway congestion or LOS was used as the primary metric for planning and environmental review purposes in Foster City. However, Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to establish a new metric for identifying and mitigating transportation impacts under the California Environmental Quality Act (CEQA) in an effort to meet the State's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation. CEQA Section 21099(b)(2) states that, upon certification of the revised guidelines for determining transportation impacts pursuant to CEQA Section 21099(b)(1), automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA. OPR identified VMT as the required CEQA transportation metric for determining potentially significant environmental impacts.[2] In December 2018, the California Natural Resources Agency certified and adopted the *State CEQA Guidelines* update package, including the section implementing SB 743 (*State CEQA Guidelines* Section 15064.3). OPR developed the Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains OPR's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.[3] As of July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA.

In accordance with SB 743, for purposes of determining potentially significant environmental impacts related to transportation, this EIR will focus only on VMT as the threshold of significance. However, because LOS is still used for local planning purposes, that information is summarized in the Non-CEQA Analysis at the end of this section and in the TIA included as Appendix C.

The information in this chapter is based on the TIA and the identification of mitigation, if any, provided in the TIA. The analyses were conducted in accordance with the current standards and methodologies required by law and set forth by the City of Foster City (City) and the City/County Association of Governments of San Mateo County (C/CAG). The TIA includes the level of service

1 Fehr & Peers. 2021. 388 Vintage Park Drive Transportation Impact Assessment. October 8.

2 Governor's Office of Planning and Research (OPR). 2016. *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013)*. January 20.

3 OPR. 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA.* December 18. Website: opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed February 7, 2019).

analysis summary, turning movement volumes, intersection lane configurations, and intersection LOS.

4.3.1 Setting

This section describes the existing transportation conditions, including the roadway network, bicycle facilities, pedestrian facilities, and transit service within the study area. The applicable regulatory framework is also described.

4.3.1.1 Existing Transportation and Circulation System

Roadway Network. Regional highways, arterials, major collectors, collectors, and local streets run throughout the project area. Regional access to the project site is provided via State Route 92 (SR-92) and United States Route 101 (US-101). Descriptions of roadways in the project area are provided below using roadway classifications defined in the Foster City General Plan Land Use and Circulation Element followed by the Federal Highway Administration category.[4]

- **SR-92** is a State highway that runs in an east-west direction from Half Moon Bay, near the coast, to Hayward on the east side of San Francisco Bay via the San Mateo Bridge. SR-92 has partial interchanges (hook ramps) with Chess Drive/Foster City Boulevard/Metro Center Boulevard and Edgewater Boulevard/Mariners Island Boulevard/Fashion Island Boulevard. It generally has three travel lanes in each direction east of US-101 and two travel lanes in each direction west of US-101, with auxiliary lanes between interchanges. In 2019, average daily volumes on SR-92 through the study area ranged from 147,000 vehicles between US-101 and Mariners Island Boulevard to 98,000 vehicles at the San Mateo Bridge.

- **US-101** is a freeway that provides regional north-south access along the San Francisco Peninsula. In the vicinity of Foster City, US-101 typically has four travel lanes in each direction with an auxiliary lane between interchanges. Although US-101 does not run directly through Foster City, it provides the primary north-south regional access to the study area via interchanges at SR-92, East Hillsdale Boulevard, and East Third Avenue in San Mateo. In 2019, average daily traffic volumes on US-101 through Foster City ranged from 233,000 vehicles at East Hillsdale Avenue to 263,000 vehicles north of SR-92.

- **Vintage Park Drive** is four-lane, north-south arterial that extends from Foster City Boulevard to Metro Center Boulevard. It fronts the project site to the east and provides driveway access to the project site. The speed limit on Vintage Park Drive is 30 miles per hour.

- **Chess Drive** is an arterial that extends eastward from Bridgepointe Parkway past Foster City Boulevard and then curves around to the north and west to intersect with Foster City Boulevard at Vintage Park Drive. Access to westbound SR-92 is provided via hook ramps just west of Foster City Boulevard. Chess Drive is four lanes wide west of Foster City Boulevard and two lanes wide to the east. On-street parking is allowed along Chess Drive to the east of Hatch Drive. It fronts the project site to the south and provides driveway access to the project site. The speed limit is

[4] Foster City, City of. 2016. *Foster City General Plan, Land Use and Circulation Element.* February 1.

30 miles per hour from the San Mateo city limit to Foster City Boulevard, after which the speed limit is 25 miles per hour.

- **Metro Center Boulevard** is a four-lane, east-west arterial that runs parallel to SR-92 south and extends between Edgewater Boulevard and Foster City Boulevard where it becomes Triton Drive. Access to eastbound SR-92 is provided by hook ramps just west of Foster City Boulevard. The speed limit is 35 miles per hour.

- **Foster City Boulevard** is a four- to six-lane arterial that extends from East Third Avenue, across SR-92, to Beach Park Boulevard. It is a major north-south arterial in Foster City. On-street parking is allowed along northbound Foster City Boulevard between Bounty Drive and approximately 450 feet south of East Hillsdale Boulevard. The speed limit is 35 miles per hour, except for the segment between East Hillsdale Boulevard and Bounty Drive, where the speed limit is 40 miles per hour.

- **Fashion Island Boulevard** is a four-lane, east-west collector that connects Bridgepoint Circle to 19th Avenue to the west. It has a full access interchange with US-101 in San Mateo. At Bridgepoint Circle, Fashion Island Boulevard continues as Bridgepoint Parkway to the east. The speed limit is 35 miles on Fashion Island Boulevard and is 30 miles per hour on Bridgepoint Parkway.

- **Shell Boulevard** is a four-lane arterial that runs north-south from Metro Center Boulevard to Beach Park Boulevard. The speed limit is 35 miles per hour.

- **East Third Avenue** is a four-lane divided arterial that runs in an east-west direction along the San Francisco Bay shoreline north of SR-92. It has a full access interchange with US-101 in the San Mateo. The speed limit is 45 miles per hour west of Foster City Boulevard and 40 miles per hour east of Foster City Boulevard.

- **Mariners Island Boulevard** connects Edgewater Boulevard and SR-92 eastbound ramps on the south end and East 3rd Avenue on the north end. It is a four-lane collector with raised medians. On-street parking is allowed on the west side of Mariners Island Boulevard between Third Avenue and Armada Way. The speed limit is 35 miles per hour.

Pedestrian Facilities. Pedestrian facilities comprise sidewalks, off-street pathways, marked and enhanced crosswalks (mid-block and at intersections), curb ramps, median refuges, and pedestrian-scale lighting. Pedestrian facilities were assessed during a site visit in August 2021. Sidewalks are provided along both sides of all roadways around the project site, with marked crosswalks and curb ramps at all intersections. Pedestrian signals with pedestrian-activated push buttons are provided at signalized intersections. Medians are often present on the wide boulevards, but median refuge islands are rarely provided for pedestrians.

Bicycle Facilities. Bikeway planning and design in California typically relies on guidelines and design standards established by California Department of Transportation (Caltrans) in the Highway Design Manual (Chapter 1000: Bikeway Planning and Design). The Caltrans guidelines cover four primary

types of bikeway facilities: Class I, Class II, Class III, and Class IV. These facility types are described below.

- **Class I Bikeways** (Bike Path) provide a completely separate right-of-way, are designated for the exclusive use of bicycles and pedestrians, and minimize vehicle and pedestrian cross-flow. In general, bike paths serve corridors that are not served by existing streets and highways, or where sufficient right-of-way exists for such facilities to be constructed.

- **Class II Bikeways** (Bike Lanes) are lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally 5 feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted. Note that when grade separation or buffers are constructed between the bicycle and vehicle lanes, these facilities are classified as Class IV Separate Bikeways.

- **Class III Bikeways** (Bicycle Routes/Bicycle Boulevards) are designated by signs or pavement markings for shared use with pedestrians or motor vehicles but have no separated bicycle right-of-way or lane striping. Bicycle routes serve either to (a) provide continuity to other bicycle facilities or (b) designate preferred routes through high-demand corridors. Bicycle routes are implemented on low-speed (less than 25 mile-per-hour) and low-volume (fewer than 3,000 vehicles/day) streets.

- **Class IV Bikeways**, also known as “cycle tracks” or “protected bike lanes,” provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars.

Figure 4.3-1 shows current bicycle facilities near the project site.[5] One bicycle facility provides direct access to the project site: a Class III bike route marked with green sharrows on Vintage Park Drive. Class II bike lanes on Chess Drive in San Mateo to the west of the project site also provide connections to other Class II bike lanes in the study area, including on Bridgepointe Circle, Fashion Island Drive, and Mariners Island Boulevard.

Additional Class III bike routes are on East Third Avenue, Foster City Boulevard, Shell Boulevard, and East Hillsdale Boulevard. However, these bicycle facilities would be ranked as a having a high “Level of Traffic Stress.” This is a measurement of bicycling comfort based on roadway characteristics. Low-stress bikeways are comfortable for everyone to ride on, including people who would be categorized as “interested, but concerned.” In contrast, high stress bikeways are only tolerated by a few, primarily those who could be described as “strong and fearless” – those comfortable riding under any conditions (about 7 percent of the population). Class II or Class II bicycle facilities on roadways with multiple lanes of vehicle traffic and speed limits above 25 miles per hour would be categorized as high-stress bikeways.

[5] There are currently no unbuilt proposed bicycle facilities in the vicinity of the project site.

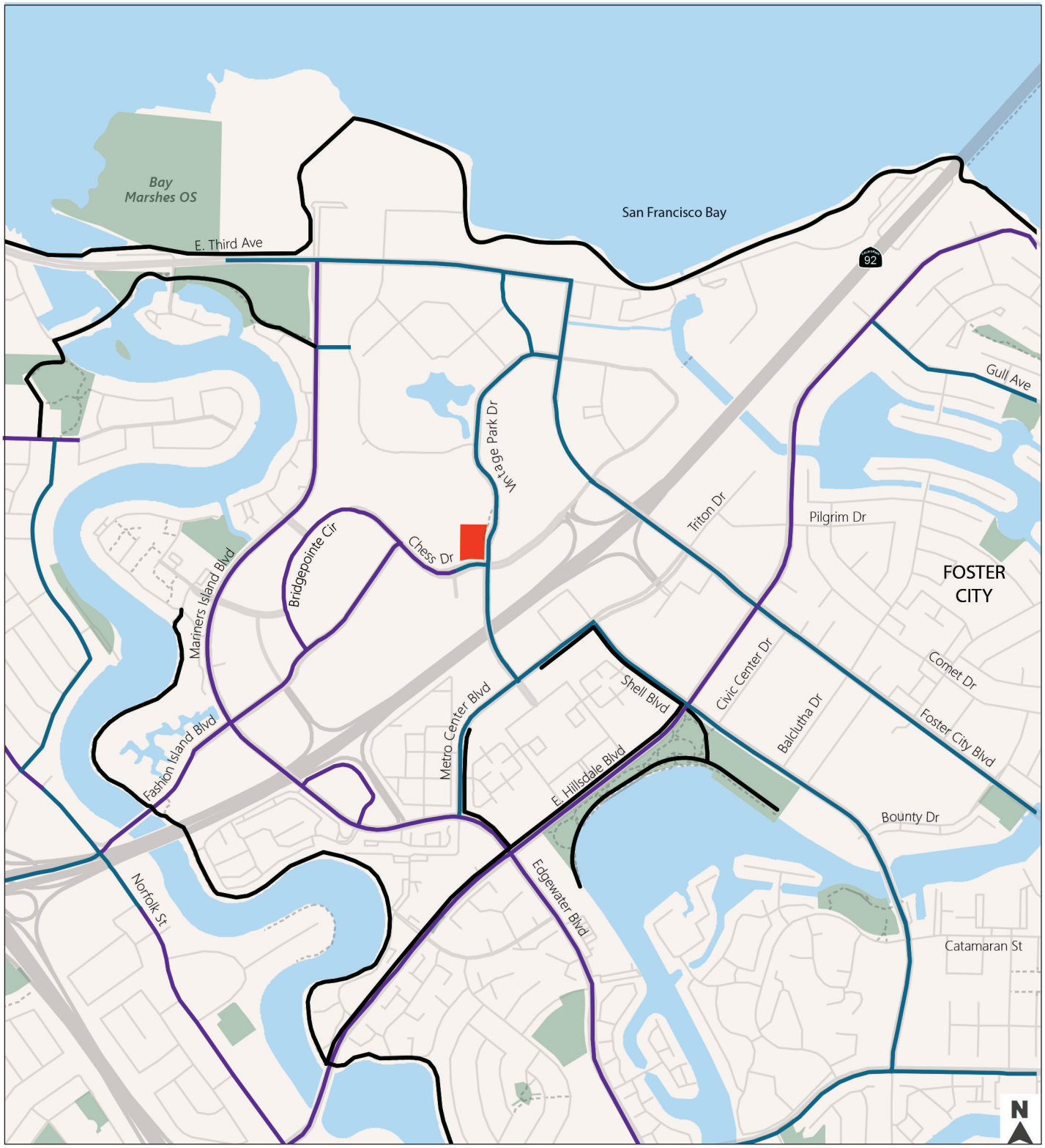

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FIGURE 4.3-1

Bicycle Facilites

Class I - Bike Path

Class II - Bike Lane

Class III - Bike Route

Project Site

N

NOT TO SCALE

388 Vintage Park Drive Project EIR

Existing Bicycle Network

SOURCE: Fehr & Peers, December 14, 2021

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All bicycle facilities adjacent to the project site would be categorized as high stress. As such, it would be unlikely that any but the most confident and fearless bicyclists would feel comfortable bicycling to the project site.

Transit Services and Facilities. Transit service within Foster City near the Project site is provided by several agencies. San Mateo County Transit District (SamTrans). SamTrans is the primary regional and local transit provider within San Mateo County, serving all rail stations within the county and major transit transfer points for Santa Clara, Alameda, and San Francisco counties. The Bay Area Rapid Transit (BART) and Caltrain rail systems provide regional connections to San Francisco in the north and Santa Clara County in the south. The Peninsula Traffic Congestion Relief Alliance (Commute.org) operates shuttle routes connecting to BART and Caltrain stations. Additionally, Alameda-Contra Costa Transit District (AC Transit) provides bus service from San Mateo County to Alameda County.

Transit service from each of these agencies is described below in Table 4.3.A and depicted in Figure 4.3-2. Many service operators continue to run reduced schedules due to the COVID-19 pandemic. The schedule and service information described below reflects pre-COVID-19 timetables, which SamTrans plans to resume when workers resume in-person work.

Several transit agencies are considering major service changes that could alter transit service to Foster City over the next few years. First, SamTrans is currently conducting a comprehensive service revisioning process, named “Reimagine SamTrans.” As of August 2021, SamTrans has developed three new potential bus system alternatives and is soliciting community feedback to inform the final proposal. Additionally, the San Mateo County Transit District Shuttle Study is undertaking a comprehensive and holistic analysis of the publicly available first/last mile shuttles serving San Mateo and Santa Clara Counties and includes recommendations for how the shuttle program might be restructured. This could eventually change the shuttle routes operated by Commute.org, which are partially funded through this program.

SamTrans. SamTrans operates Route 251, Route 256, Route 54, Route 57, and Route FCX in Foster City. Route 251 provides a connection between the Hillsdale Shopping Center and Hillsdale Caltrain station in San Mateo, Foster City, and the Bridgepointe Shopping Center in San Mateo. Route 256 operates along the same route as Route 251, but in the opposite direction for the loop within Foster City. Routes 54 and 57 serve the weekday morning and afternoon school commute to/from Bowditch Middle School and Hillsdale High School in San Mateo and Foster City, respectively. Route FCX (Foster City Commuter Express) operates weekday morning service from Foster City to San Francisco and evening service from San Francisco to Foster City. A bus stop on Chess Drive directly south of the project site serves Routes 251 and 256 traveling in the westbound direction. A bus stop at 3000 Bridgepointe Parkway (500 feet as the crow flies from the project site, or 0.4 mile walking) serves Routes 251 and 256 traveling in the eastbound direction.

In addition to its traditional bus routes, SamTrans runs paratransit service for persons with disabilities through its Redi-Wheels program. The Foster City Parks & Recreation Department’s Senior Express Shuttle also operates on-demand service for Foster City residents who are 50 years of age and above.

Table 4.3.A: Existing Transit Service

Service Provider	Name/Description	Hours of Operation (Headways)[a]	Service Status (July 2021)
SamTrans	251 – Caltrain Connection	11:30 a.m. – 8:17 p.m. Weekdays (60 min.) 8:30 a.m. – 7:20 p.m. Saturdays (120 min.)	Reduced service
	256 – Caltrain Connection	6:34 a.m. – 5:25 p.m. Weekdays (60 min.) 7:30 a.m. – 8:18 p.m. Saturdays (120 min.)	Same service
	54 – School Service	7:39 a.m. – 8:05 p.m. Weekdays (one bus) 1:50 PM – 3:40 p.m. Weekdays (six buses)	Suspended
	57 – School Service	6:50 a.m. – 7:20 a.m. Weekdays (one bus) 2:10 p.m. – 4:02 p.m. Weekdays (two buses)	Suspended
	FCX – Foster City Commuter Express	6:00 a.m. – 8:00 a.m. Weekdays (30 min.) 3:30 p.m. – 6:00 p.m. Weekdays (30 min.)	Same service
AC Transit	M – Transbay Service	5:57 a.m. – 6:53 p.m. Weekdays (40 min.)	Suspended
Commute.org	NFC – North Foster City-Millbrae BART/Caltrain	6:35 a.m. – 10:02 a.m. Weekday (30 min.) 4:04 p.m. – 7:18 p.m. Weekday (30 min.)	Reduced service
	LC – Foster City-Lincoln Centre Caltrain	7:00 a.m. – 9:40 a.m. Weekday (45 min.) 3:08 p.m. – 7:05 p.m. Weekday (40 min.)	Reduced service
	MAR – Mariners Island Caltrain	7:00 a.m. – 10:25 a.m. Weekday (45 min.) 3:12 p.m. – 6:39 p.m. Weekday (45 min.)	Reduced service

Source: Fehr & Peers (2021).

[a] Hours of operation reflect those in place prior to the beginning of the ongoing COVID-19 pandemic.

AC Transit = Alameda-Contra Costa Transit District
BART = Bay Area Rapid Transit
min. = minutes
SamTrans = San Mateo County Transit District

LSA

FIGURE 4.3-2

- Bus or Shuttle Stop
- SamTrans Route
- SamTrans Express Route
- AC Transit Route
- Commute.org Route
- Project Site

N

NOT TO SCALE

SOURCE: Fehr & Peers, August 2021

388 Vintage Park Drive Project EIR
Existing Transit Service

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AC Transit. AC Transit provides transbay service between Hayward and San Mateo. Line M operates across the San Mateo Bridge/SR-92 and travels on Foster City Boulevard, Chess Drive, Vintage Park Drive, Metro Center Boulevard, and East Hillsdale Boulevard in Foster City. A bus stop on Vintage Park Drive serves Line M for westbound morning and eastbound afternoon and evening trips and is approximately 500 feet north of the project site. As of June 13, 2021, AC Transit has temporarily suspended the transbay service Line M in response to the COVID-19 pandemic. The timeline for service return is unknown.

Commute.org Shuttles. The Mariners Island Shuttle provides service between the Hillsdale Caltrain Station and businesses in the San Mateo and Foster City boundary areas during commute hours, Monday through Friday. The nearest Mariners Island Shuttle stop to the project site is about 400 feet east of the project site.

The North Foster City Shuttle and Lincoln Centre Shuttle also operate in Foster City. The North Foster City Shuttle provides service between the Millbrae Intermodal Station (with BART and Caltrain service) and businesses and office buildings in the North Foster City Area during commute hours, Monday through Friday. The Lincoln Centre Shuttle runs between the Belmont Caltrain Station and businesses in the Lincoln Centre Area in north Foster City. The nearest shuttle stop for both routes is located at Bridgepoint Circle and Bridgepoint Parkway, about 0.2 mile to the west of the Project site.

Both shuttles currently operate with reduced service relative to pre-COVID service levels. At the present, there is no clear plan for when shuttles will return to pre-COVID service levels.

4.3.1.2 Analysis Scope and Methodology

Until July 1, 2020, roadway congestion or LOS was used as the primary study metric for planning and environmental review of development projects in California. However, SB 743 required the OPR to establish a new metric for identifying and mitigating transportation impacts pursuant to CEQA in an effort to meet the State's goals to reduce GHG emissions, encourage infill development, and improve public health through more active transportation. OPR identified VMT as the required CEQA transportation metric and beginning July 1, 2020, VMT (not LOS) is the only legally acceptable threshold for transportation-related environmental impacts pursuant to CEQA.

VMT is a measurement of the amount and distance that a person drives, accounting for the number of passengers within a vehicle. Many interdependent factors affect the amount and distance a person might drive. In particular, the type of built environment affects how many places a person can access within a given distance, time, and cost, using different ways of travel (e.g., private vehicle, public transit, bicycling, walking). Typically, low-density development located at great distances from other land uses and in areas with few alternatives to the private vehicle provides less access than a location with high density, mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT per capita compared to a similarly sized development located in urban areas. In general, higher VMT areas are associated with more air pollution, including GHG emissions and energy usage, than lower VMT areas. VMT is calculated by multiplying the number of trips generated by a project by the total distance of each of those trips.

Lead agencies have the discretion to set their own thresholds of significance with the goals of the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The City does not currently have an adopted VMT threshold. OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold. OPR's guidance on thresholds is presented in the OPR Technical Advisory and the California Air Resources Board's (CARB) 2017 Scoping Plan – Identified VMT Reductions and Relationship to State Climate Goals. The CARB analysis indicates that the VMT threshold would need to be 16.8 percent for automobile-only VMT to achieve State GHG reduction goals. These points of reference are subject to change over time, however, depending on statewide forecasts of population and travel, as well as economic conditions (e.g. short-term and long-term effects of the COVID-19 pandemic).

OPR recommends office project VMT should be compared to a total work-based VMT/employee threshold. This metric helps compare the project's relative transportation efficiency to the regional average (i.e., all else being equal, does creating new employment in this area result in more or less VMT per employee than creating it in other areas?). The analysis in this EIR uses a home-based work VMT per employee as the metric for evaluation of the proposed project. Home-based work VMT only accounts for commute trips and does not capture work-based other trips that may occur throughout the day (e.g., driving to lunch or to meetings during the middle of the day) due to differences in trip-based and tour-based models. Home-based work VMT per employee is an appropriate metric to use because it is normalized and compared to similar baseline values.

A significant impact would occur should existing home-based work VMT per employee in the travel demand analysis zone (TAZ) that encompasses the project results in greater than 14.3 VMT per employee under existing conditions. This is based on the threshold of 15 percent below the existing county-wide average of 16.8 VMT per employee. The City of Foster City selected county-wide average for use as a threshold to account for both local context and regional land use characteristics.

4.3.1.3 Regulatory Framework

The following State, regional, County of San Mateo and local transportation plans, policies, and regulations guide transportation planning in Foster City.

State Regulations. This section summarizes applicable State regulations guiding transportation planning in Foster City.

> ***California Department of Transportation.*** Caltrans is responsible for the maintenance and operation of State routes and highways. In Foster City, Caltrans facilities include SR-92 and US-101. Caltrans maintains a volume monitoring program and reviews local agencies planning documents (such as this Environmental Impact Report [EIR]) to assist in its forecasting of future volumes and congestion points. The Guide for the Preparation of Traffic Impacts Studies published by Caltrans is intended to provide a consistent basis for evaluating traffic impacts to State facilities. The City recognizes that "Caltrans endeavors to maintain a target level of service at the transition between LOS C and LOS D on State highway facilities"; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency

consult with Caltrans to determine the appropriate target level of service. Caltrans states that, for existing State highway facilities operating at less than the target LOS, the existing LOS should be maintained.

Caltrans released a VMT-Focused Transportation Impact Study Guide (May 20, 2020) that recommends use of the OPR recommendations for land use projects and plans. For transportation projects, Caltrans has suggested that any increase in VMT would constitute a significant impact for transportation projects. This has been referred to as the "Net Zero VMT threshold."

Senate Bill 375. As a means to achieve the Statewide emission reduction goals set by Assembly Bill 32 ("The California Global Warming Solutions Act of 2006"), SB 375 ("The Sustainable Communities and Climate Protection Act of 2008") directs the CARB to set regional targets for reducing GHG emissions from cars and light trucks. Using the template provided by the State's Regional Blueprint program to accomplish this goal, SB 375 seeks to align transportation and land use planning to reduce VMT through modified land use patterns. There are five basic directives of the bill: (1) creation of regional targets for GHG emissions reduction tied to land use, (2) a requirement that regional planning agencies create a sustainable communities strategy (SCS) to meet those targets (or an Alternative Planning Strategy if the strategies in the SCS would not reach the target set by CARB), (3) a requirement that regional transportation funding decisions be consistent with the SCS, (4) a requirement that the Regional Housing Needs Allocation numbers for municipal general plan housing element updates must conform to the SCS, and (5) CEQA exemptions and streamlining for projects that conform to the SCS. The implementation mechanism for SB 375 that applies to land use in Foster City is Plan Bay Area.

Senate Bill 743. SB 743 was signed into law in 2013 and fundamentally changed the way transportation impacts under CEQA are analyzed. It required the OPR to "prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed revisions to the [CEQA] guidelines …establishing criteria for determining the significance of transportation impacts of projects" to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses."

On December 28, 2018, the Natural Resources Agency adopted *State CEQA Guidelines* Section 15064.3, which establishes specific criteria for evaluating a project's transportation impacts and states that "vehicle miles traveled is the most appropriate measure of transportation impacts". It gives agencies the "discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure" provided that "[a]ny assumptions used to estimate vehicle miles traveled… should be documented and explained in the environmental document prepared for the project." Section 15064.3 further states that except for certain transportation projects, "a project's effect on automobile delay shall not constitute a significant environmental impact." See *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal. App. 5th 609, 626 (holding that a general plan's impact on LOS, which effectively measures automobile delay, can no longer constitute a significant environmental impact).

Additionally, OPR issued a technical advisory memorandum in December 2018 that includes general guidance and information for lead agencies to use in implementing SB 743, including choosing VMT methodology and establishing VMT thresholds. Lead agencies have until July 1, 2020 to implement methodologies and thresholds related to VMT to comply fully with SB 743. Because Foster City has not yet adopted citywide generally applicable VMT thresholds for impact determination (pursuant to 14 Cal. Code Regs 15064(b) and because LOS analysis can no longer be used to make impact determinations, a project-specific (or ad hoc) VMT threshold is used for this analysis as allowed under CEQA and as explained in further detail in other sections.

Regional Regulations. This section summarizes applicable regional regulations guiding transportation planning in Foster City.

Metropolitan Transportation Commission. The Metropolitan Transportation Commission (MTC) is responsible for planning, coordinating, and financing transportation projects in the nine-county Bay Area. The local agencies that comprise these nine counties help the MTC prioritize projects based on need, feasibility, and conformance with federal and local transportation policies. In addition to coordinating with local agencies, the MTC distributes State and federal funding through the Regional Transportation Improvement Program.

Plan Bay Area. Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan. This strategy integrates transportation, land use and housing to meet greenhouse gas reduction targets set by the CARB. The plan meets those requirements. In addition, the plan sets a roadmap for future transportation investments and identifies what it would take to accommodate expected growth. The plan neither funds specific transportation projects nor changes local land use policies.

In the Bay Area, the MTC and the Association of Bay Area Governments adopted Plan Bay Area 2050 in October 2021. To meet the GHG reduction targets, the plan identifies four Growth Geographies where future growth in housing and jobs should be focused: priority development areas (PDAs), priority production areas (PPAs), transit-rich areas (TRAs), and high-resource areas (HRAs). The agencies estimate more than 80 percent of housing growth would occur within TRAs and nearly 30 percent would be within HRAs, and more than 60 percent of job growth would be within walking distance of high-quality transit between 2015 and 2050.[6] The project site is not within a Growth Geography.

City/County Association of Governments of San Mateo Congestion Management Program. The purpose of the Congestion Management Plan (CMP) is to identify strategies to respond to future transportation needs, develop procedures to alleviate and control congestion, and promote countywide transportation solutions. To monitor attainment of the CMP, the C/CAG adopted the roadway LOS standards. The LOS standards established for San Mateo County vary by roadway segments and conform to current land use plans and development differences among the coast, bayside, older downtowns, and other areas of San Mateo County. C/CAG has a

[6] Note: Growth projections do not sum to 100 percent because PDAs, TRAs, and HRAs are not mutually exclusive.

countywide threshold of 100 added peak-hour trips when determining if any CMP roadway facilities should be included as part of the TIA.

San Mateo County Comprehensive Bicycle and Pedestrian Plan. The San Mateo County Comprehensive Bicycle and Pedestrian Plan was developed by the C/CAG with support from the San Mateo County Transportation Authority to address the planning, design, funding, and implementation of bicycle and pedestrian projects countywide. The following lists relevant goals and policies:

Goal 2: More People Riding and Walking for Transportation and Recreation

- **Policy 2.6**: Serve as a resource to county employers on promotional information and resources related to bicycling and walking.

Goal 4: Complete Streets and Routine Accommodation of Bicyclists and Pedestrians

- **Policy 4.1:** Comply with the complete streets policy requirements of Caltrans and the Metropolitan Transportation Commission concerning safe and convenient access for bicyclists and pedestrians, and assist local implementing agencies in meeting their responsibilities under the policy.

- **Policy 4.5:** Encourage local agencies to adopt policies, guidelines, standards, and regulations that result in truly bicycle-friendly and pedestrian-friendly land use developments, and provide them technical assistance and support in this area.

- **Policy 4.6:** Discourage local agencies from removing, degrading or blocking access to bicycle and pedestrian facilities without providing a safe and convenient alternative.

City of Foster City. This section summarizes applicable City's regulations guiding transportation planning in Foster City.

Foster City General Plan. The Land Use and Circulation Element of the Foster City General Plan was adopted in February 2016. The applicable circulation goals, policies, and programs related to transportation impacts related to the construction of the project are included below. Foster City's City Council recently adopted amendments to the General Plan to include reference to the recently adopted Green Infrastructure Plan, which encourages all street design and development to incorporate green streets and green infrastructure best practices.

- **Goal LUC-E: Provide for Diversified Circulation Needs.** Develop, improve and maintain a circulation system which provides efficient and safe access for private vehicles, commercial vehicles, public transit, emergency vehicles, bicycles and pedestrians.

    - **Policy LUC-E-1: Improvements to Existing Streets.** The City will maintain and improve the existing system of major and collector streets.

- **Policy LUC-E-2: Complete Streets.** The City will plan for a balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel.

- **Policy LUC-E-3: Streets in Residential Neighborhoods.** Residential neighborhoods shall be protected from through traffic by maintaining the system of narrower collector and local streets and minimizing the number of through streets. To accomplish this, the City may consider other traffic calming techniques.

- **Policy LUC-E-4: Private Streets and Public Loop or Cul-de-Sac Streets.** The City will enforce design standards for private streets and public loop or cul-de-sac streets to ensure that they meet minimum requirements for two-way traffic, parking, and emergency access. Private streets and public loop or cul-de-sac streets may be approved with narrower than standard widths, provided that emergency access and parking can be safely accommodated. They are not intended to provide curbside parking, and the roads are designed to serve only those residences on that street or within that development.

- **Policy LUC-E-5: Access to New Commercial and Industrial Projects.** New commercial and industrial developments shall be designed so that, wherever necessary and possible, entrance to the projects can be gained by way of left- or right-turn only lanes. Only the minimum number of entrance or exit points shall be allowed as are needed to ensure safe and efficient internal traffic flow and to reduce through traffic delays on public roads serving the project.

- **Policy LUC-E-6: Create Opportunities for Transit Access.** Create opportunities to improve transit and access to regional transit with new or modified development, as appropriate.

- **Policy LUC-E-7: Coordination with Transit Agencies that Serve San Mateo County.** The City shall work with SamTrans, Alameda-Contra Costa Transit District (AC Transit), the Peninsula Traffic Congestion Relief Alliance, RIDES and other agencies that serve San Mateo County in defining new transit routes and improving the public transit and transportation system.

- **Policy LUC-E-8 Pedestrian, Bicycle and Neighborhood Electric Vehicle (NEV) Friendly Design.** Encourage bicycling, walking and use of NEVs instead of driving automobiles to reduce greenhouse gas emissions, save money on fuel and maintenance, and foster a healthier population. Prioritize pedestrian and bicycle-friendly improvements including bike lanes on main streets, an urban bike-trail system, bike parking, pedestrian crossings, and associated master plans with new or modified development, as appropriate.

- **Policy LUC-E-9: Bicycle Routes and Pedestrian Paths.** Maintain a system of bicycle routes and pedestrian paths, which will include separate bicycle lanes and posted bicycle routes. Pedestrian pathways and easements shall be maintained, either by the

City, or, in the case of private ownership, according to a maintenance agreement or landscaping district agreement applicable to the pathway/easement.

- **Goal LUC-F: Maintain Acceptable Operating Conditions on the City's Road Network.** Maintain acceptable operating conditions on the City's road network at or above LOS D, or equivalent measurement, and encourage the maximum effective use of public and private vehicles, reduce the growth in peak hour traffic volumes and reduce single passenger trips.
    - **Policy LUC-F-1: Traffic Level of Service Standards.** The City shall seek to achieve a traffic service level of "C" or better on City streets and level of "D" or better during peak traffic hours, although it will be necessary to accept level of service "E" or "F" at the SR-92 Westbound Ramps / Chess Drive, the Foster City Boulevard / Metro Center Boulevard / Triton Drive, Vintage Park Drive / Chess Drive, and the Foster City Boulevard / Chess intersections due to their role as access points to the freeway system. The level of service standard will be maintained through the following means:
        - Intelligent Transportation Systems (ITS).
        - Transportation Demand Management (TDM) for development projects.
        - Capital Improvement Program and coordination with federal, state, county and district funding programs for street and other transportation improvements.
        - Developer payment of pro rata fair share of traffic improvement costs for new developments.
- **Goal LUC-G: Provide Adequate Parking.** Ensure that adequate off-street parking is incorporated into new and modified projects and designed for safe and effective circulation.
    - **Policy LUC-G-2: Preferred Parking/Electric Plug-in.** Encourage businesses, developers, and property managers to create preferred parking for electric and alternative fuel vehicles and study the installation of electric charging stations for plug-in vehicles.
    - **Policy LUC-G-3: Off-Street Parking Requirements.** The City shall maintain off-street parking requirements based on use permits of record, the historical parking patterns of residential and non-residential projects, and related information developed by the Urban Land Institute, Institute of Traffic Engineers, or other reliable sources.
- **Goal LUC-H:** Foster a More Sustainable Community. Strive to be a community that meets the needs of the present without compromising the ability of future generations to meet their own needs by promoting land use strategies that decrease reliance on automobile use, increase the use of alternative modes of transportation, maximize efficiency provision of services and reduce emissions of GHGs.

- **Policy LUC-H-2: Reduce GHG Emissions.** The City will strive to reduce GHG emissions by reducing vehicle miles traveled by supporting trip reduction programs and encouraging the use of alternative fuels and transportation technologies.

- **Goal LUC-L: Provide Adequate Services and Facilities.** Ensure that new and existing developments can be adequately served by municipal services and facilities.

4.3.2 Impacts and Mitigation Measures

This section analyzes the potential of the proposed project to result in impacts on the transportation network. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and identifies mitigation measures, as appropriate.

4.3.2.1 Significance Criteria

The proposed project would result in a significant impact related to transportation if it would:

1) Conflict with an applicable plan, ordinance, or policy, including the congestion management program, addressing all components of the circulation system;

2) Exceed an applicable VMT threshold of significance;

3) Substantially increase hazards due to a design feature or incompatible uses; or

4) Result in inadequate emergency access.

To apply the significance criteria listed above, the analysis in this section uses the following significance thresholds, which are based on federal, State, and local regulations.

Criterion 1. The following thresholds are used to determine whether the proposed project would conflict with an applicable plan, ordinance, or policy, including the congestion management program.

Transit. Based on General Plan Goals LUC-E and LUC-H and the City's interpretation of CEQA Appendix G, conflicts with a program, plan, ordinance or policy related to transit would be considered significant if the project would:

a. Disrupt existing transit services or facilities. This includes disruptions caused by project access points or staging areas near streets used by transit and transit stops/shelters; or

b. Interfere with planned transit services or facilities; or

c. Conflict or create inconsistencies with adopted transit system plans, guidelines, policies, or standards.

Roadway System. Per SB 743, transportation impacts related to vehicle delay or LOS are no longer considered significant environmental impacts. The criteria listed below related to intersection and freeway segments are discussed for consistency with General Plan Goal LUC-F.

Intersection effects would be inconsistent with the standards set forth in the General Plan if the project would:

a. Cause a signalized intersection operating at an acceptable level of service (LOS A-D) to deteriorate to an unacceptable level (LOS E-F) with the addition of project trips; or

b. Increase average delay by four or more seconds at an intersection that is already operating at an unacceptable level (LOS E-F) without the project.

As noted above, Policy LUC-F in the Foster City General Plan Land Use and Circulation Element states that it will be necessary to accept LOS E or F at the following intersections: Chess Drive/SR-92 ramps, Foster City Boulevard/Triton Boulevard/Metro Center Boulevard, and East Hillsdale Boulevard/Edgewater Boulevard.

Bicycle and Pedestrian Facilities. Based on General Plan Goals LUC-E and LUC-H and the City's interpretation of CEQA Appendix G, conflicts with a program, plan, ordinance or policy related to bicycle and pedestrian facilities would be considered significant if the project would:

a. Disrupt existing or planned bicycle or pedestrian facilities (e.g. San Mateo County Bike Plan, Foster City Bicycle Master Plan); or

b. Create inconsistencies with adopted bicycle or pedestrian system plans, guidelines, or policy standards.

Criterion 2. The following threshold is used to determine whether the proposed project would exceed the applicable VMT threshold of significance.

VMT. Based on California Air Resources Board (ARB) recommended thresholds,[7] impacts related to VMT would be considered significant if the project would:

a. Generate VMT/service population that is higher than 16.8 percent below the regional average.

As noted above, Foster City has not yet adopted generally applicable VMT thresholds for impact determination. Foster City is currently working with C/CAG to identify citywide VMT thresholds. The project-specific threshold used for analysis in this document is based on recommendations published by OPR, which is the most current available for Foster City at the time of preparation of this TIA. Additional information related to VMT thresholds is included in other sections.

[7] California Air Resources Board. 2019. 2017 Scoping Plan-Identified VMT Reductions and Relationships to State Climate Goals. January.

Criterion 3. The following threshold is used to determine whether the proposed project would substantially increase hazards due to a design feature or incompatible uses.

Hazards. Based on General Plan Goal LUC-E and the City's interpretation of CEQA Appendix G, impacts related to hazards would be considered significant if the project would:

a. Substantially increase hazards due to a geometric design feature; or

b. Result in an incompatible land use.

Criterion 4. The following threshold is used to determine whether the proposed project would conflict or create inconsistencies with adopted transit system plans, guidelines, policies, or standards.

Emergency Access. Based on General Plan Goal LUC-E and the City's interpretation of CEQA Appendix G, impacts related to emergency access would be considered significant if the project would:

a. Limit emergency vehicle access routes or roadway facilities; or

b. Create a project site that is inaccessible to emergency vehicles.

4.3.2.2 Proposed Project

As described in Chapter 3, Project Description, of this EIR, development of the proposed project would result in the demolition of the existing restaurant building and construction of a 120,164-square-foot, four-story office building including a ground-level podium and surface parking totaling 210 vehicle spaces, as well as associated open space, circulation and loading, and infrastructure improvements. A total of 95,931 square feet of R&D space is proposed, approximately 50 percent of which would be laboratory space and 50 percent would be office space, distributed evenly throughout each floor.

The ground level of the proposed building would include a garage that would contain 102 parking spaces and would be accessed from a driveway at the northwest corner of the proposed building. An additional 108 surface parking spaces would be provided along the northern and western boundaries of the project site, for a total of 210 parking spaces. A total of 20 bicycle parking spaces would be provided in a long-term storage room in the parking garage. A total of 14 motorcycle parking spaces would be provided throughout the project site. A loading dock that would be able to accommodate a WB-40 truck[8] would be provided at the northwestern corner of the building. An additional loading zone for package drop off is proposed at the main entry.

Trip Generation. Trip generation rates were determined using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. The ITE rate for General Office Building was used to determine project trip generation. The proposed project would have a lower employee density than a typical office due to the lab space allocated to life sciences uses compared to

[8] A WB-40 truck is defined as a medium- to large-sized box truck or tractor trailer with a 40-inch wheelbase.

traditional office buildings. Based on the total number of employees at the site, the proposed project would have an employee density of 1 employee per 450 square feet. The ITE rate for General Office Building would have an approximate average employee density of 1 per 340 square feet. To reflect the effects of having a lower employee density associated with a life science use, trip generation rates per employee were used instead of trip rates per square foot of office use.

As shown in Table 4.3.B, application of the trip generation rates would result in a project-generated increase in the number of daily AM and PM peak-hour vehicle trips. The proposed project would generate 699 new daily vehicle trips, 78 net new AM peak-hour vehicle trips (65 inbound trips and 13 outbound trips), and 85 net new PM peak-hour vehicle trips (17 inbound trips and 68 outbound trips).

Table 4.3.B: Project Vehicle Trip Generation

Land Use	Units	ITE Code	Vehicle Trips						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed General Office Building	213 employees	710	699	65	13	78	17	68	85

Source: Fehr & Peers (2021).
ITE = Institute of Transportation Engineers

Proposed Transportation Demand Management Plan. The project sponsor would implement the proposed Transportation Demand Management Plan for 388 Vintage Park Drive (TDM Plan)[9] as part of the proposed project in an effort to reduce project-generated vehicle trips and VMT and encourage travel by other modes.

Per the C/CAG Transportation Demand Management Policy Update Approach,[10] non-residential projects (office, industrial, and institutional) that are considered large projects, generating greater than 500 average daily traffic (ADT), are required to develop a TDM plan to reduce the number of project ADT by 35 percent.

As shown in Table 4.3.B, the proposed project would generate 78 new trips in the AM peak hour and 85 new trips in the PM peak hour. Based on C/CAG's requirement, a 35 percent reduction would equate to 50 trips in the AM peak hour (a reduction of 28 trips) and 55 trips in the PM peak hour (a reduction of 30 trips).

The potential effectiveness of the proposed TDM measures was evaluated using TDM+, a tool based on Quantifying Greenhouse Gas Mitigation Measures,[11] a report for the California Air Pollution

9 Kimley Horn. 2021. *Proposed Transportation Demand Management for 388 Vintage Park Drive in Foster City, CA.* September 23.

10 Advanced Mobility Group. 2021. *C/CAG Transportation Demand Management Policy Update Approach.* March.

11 California Air Pollution Control Officers Association. 2010. *Quantifying Greenhouse Gas Mitigation Measures.* August.

Control Officer's Association (CAPCOA) produced in 2021. These estimates are widely accepted as the best available information on how TDM measures can affect VMT, greenhouse gas emissions, and overall vehicle trips to or from a site. The quantification methods provided in the CAPCOA report are based on an extensive literature review and are appropriate for use in this project-level analysis. Based on this assessment, the proposed TDM plan could reduce 10 percent of home-based work VMT per employee.

Proposed TDM measures are described below and summarized in Table 4.3.C.

- **Free/Preferential Parking for Carpools:** The proposed project would allocate a total of 14 preferred parking spaces, which includes clean air, vanpool, and electric vehicle spaces.
- **TDM Coordinator/Contact Person:** A designated TDM Coordinator would facilitate the TDM program.
- **Actively Participate in Commute.org, or Transportation Management Association (TMA) Equivalent:** The project sponsor would coordinate with the building tenant and obtain certification of registration from Commute.org or similar TMA incorporation documents.
- **Carpool or Vanpool Program:** The proposed project would provide a carpool or vanpool program for employees and register the program with Commute.org for active users to become eligible for fiscal rewards.
- **Transit or Ridesharing Passes/Subsidies:** The project sponsor would distribute transit passes, subsidized transit passes, or carpool/vanpool subsidies equivalent to 30 percent of their monthly fare value or $50 monthly.
- **Pre-Tax Transportation Benefits:** The project sponsor would require that tenants provide employees the option to participate in a pre-tax transit program and use pre-tax income to pay for commute costs.
- **Secure Bicycle Storage:** The proposed project would provide enough bicycle parking spaces to meet the minimum California Green Building Standards Code requirements.
- **Showers, Lockers, and Changing Rooms for Cyclists:** The proposed project would include showers and changing rooms for those walking/bicycling to work. The proposed project is expected to provide four showers, lockers, and changing rooms.
- **Design Streets to Encourage Bicycle and Pedestrian Access:** The proposed project would provide bicycle and pedestrian access on-site.
- **Reduced Parking.** The proposed project would provide 210 parking spaces, which is more than 10 percent less than the 320 required parking spaces or 256 adjusted required parking spaces (TDM and bike/motorcycle adjustment) based on the City's Municipal Code.

Table 4.3.C: C/CAG TDM Policy Compliance

TDM Measure	C/CAG's Vehicle Trip Reduction Value	Included in 388 Vintage Park Drive TDM Plan?
Required TDM Measures		
Free/Preferential Parking for Carpools	1.0%	Yes
TDM Coordinator/Contact Person	0.5%	Yes
Actively Participate in Commute.org, or Transportation Management Association (TMA) Equivalent	16.5%	Yes
Carpool or Vanpool Program	2.0%	Yes
Transit or Ridesharing Passes/Subsidies	10.0%	Yes
Pre-Tax Transportation Benefits	1.0%	Yes
Secure Bicycle Storage	1.0%	Yes
Showers, Lockers, and Changing Rooms for Cyclists	2.0%	Yes
Design Streets to Encourage Bike/Ped Access	1.0%	No[1]
Additional Recommended TDM Measures		
Flex Time, Compressed Work Week, Telecommute	5.0%	No
Paid Parking at Market Rate	25.0%	No
Short Term Daily Parking	2.0%	No
Reduced Parking	10.0%	Yes[2]
Developer TDM Fee / TDM Fund	4.0%	No
Car Share On-Site	1.0%	No
Land Dedication or Capital Improvements for Transit	4.0%	No
Shuttle Program/Shuttle Consortium/Fund Transit Service	10.0%	No
Bike/Scooter Share On-Site	1.0%	No
Active Transportation Subsidies	2.0%	No
Gap Closure	7.0%	No
Bike Repair Station	0.5%	No
Pedestrian Oriented Uses & Amenities on Ground Floor	3.0%	No
Project Vehicle Trip Reduction Value	**44%[3]**	

Source: Fehr & Peers (2021).

1. The Project sponsor indicated that the Project would qualify for this measure due to the proximity of a Class II bicycle lane within a half mile of the Project site. Of the two roadways adjacent to the Project, Vintage Park Drive is a designated Class III bike route and Chess Drive has a Class II bike lane west of the project site in San Mateo. However, due to the number of lanes and vehicular speed limits, as noted in the Foster City Bicycle Network Assessment (2017), both roads would be classified as high stress (Level of Traffic Stress, or LTS, 4). High stress bikeways are only tolerated by a few: primarily those who could be described as "strong and fearless" – those comfortable riding under any conditions (about 7% of the population). Additionally, the C/CAG requirements note that other criteria could include direct pedestrian connections to transit and a front setback of less than 20 feet. The Project entrance is approximately 38 feet from the sidewalk.
2. Parking reductions qualify if the Project provides off-street private parking at least 10% below local zoning code required minimums, on a per unit or square foot basis. The Project would provide less parking than required under City parking requirements (256 required; 210 proposed).
3. These calculations differ from the CEQA VMT reductions described above as these calculations are based on planning-level vehicle trip reduction estimates for compliance purposes with San Mateo County's Congestion Management Plan and are not applicable for CEQA reductions.

C/CAG = City/County Association of Governments of San Mateo County
CEQA = California Environmental Quality Act
TDM = Transportation Demand Management
VMT = vehicle miles traveled

4.3.2.3 Project Impacts

This section analyzes potential project-specific and cumulative impacts to the transportation and circulation network in the study area.

1) Conflict with an applicable plan, ordinance, or policy, including the congestion management program, addressing all components of the circulation system

This section discusses the proposed project's impacts related to conflicts with applicable plans, ordinances, and policies. As discussed in more detail below, for CEQA purposes, the proposed project would be consistent with applicable plans, ordinances, and policies that address the circulation system; therefore, impacts would be less than significant.

Transit Facilities. The proposed project would generate vehicle trips in the vicinity of existing transit services and would generate some new transit trips to existing routes. AC Transit, SamTrans, and Commute.org shuttles travel along the project's frontage. The addition of 85 vehicle trips during the PM peak hour, or 1 to 2 new vehicles per minute, would not create a disruption to transit service surrounding the project site. Project-added vehicle trips represent less than 2 percent of entering volumes at study intersections during the PM peak hour. Most people are expected to arrive by automobile to the project site; therefore, the proposed project is not expected to generate a substantial number of new transit trips that would cause any transit route to require additional capacity. The proposed project would not include features that would disrupt existing or planned transit routes or facilities. The project site's driveways would not cause disruptions to existing or planned transit service or transit stops. The proposed project would not conflict with any adopted transit system plans, guidelines, policies, or standards. Therefore, impacts to transit facilities would be less than significant.

Roadway Facilities. With the addition of project trips, the intersections of Chess Drive/Foster City Boulevard, Chess Drive/SR-92 westbound ramps, Foster City Boulevard/Metro Center Boulevard, and Metro Center Boulevard/SR-92 eastbound ramps would continue to operate at an acceptable LOS with project-added trips during the AM peak hour. During the PM peak hour, all intersections operate at the same LOS as under Existing Conditions, except the intersection of Chess Drive/SR-92 westbound ramps during the PM peak hour, which would degrade from LOS D to LOS F. Adjusting the signal timing by transferring an additional 3 seconds to the eastbound through movement from the westbound approach would reduce the average delay at this intersection to an acceptable LOS D. However, the City's Policy LUC-F-1 notes that it will be necessary to accept level of service "E" or "F" at the SR-92 westbound ramps/Chess Drive. Therefore, the potential for project vehicle trips to increase delay at this location would not conflict with the City's adopted policies and implementation of the proposed project would not require any modifications to this intersection. The City would monitor roadway conditions and signal operations as a part of routine maintenance and would adjust signal timing in the future as traffic conditions warrant. The intersections of Chess Drive/Foster City Boulevard, Foster City Boulevard/Metro Center Boulevard, and Metro Center Boulevard/SR-92 eastbound ramps continue to operate at unacceptable LOS E or F with the addition of project trips, similar to existing conditions. Therefore, intersection operations under Existing Plus Project Conditions are anticipated to be consistent with standards set forth in the General Plan.

Pedestrian and Bicycle Facilities. As shown on Figure 4.3-3, a new 15-foot-wide, on-site pathway would provide direct, barrier-free non-motorized access to both the proposed building's main entrance and secure bicycle parking facility, which is approximately 80 feet south of the main entrance. Secondary pedestrian access is provided between Chess Drive and the building's south elevation via a five-foot-wide pathway.

The proposed building's main entrance and overall site layout is generally pedestrian-oriented; building entrances are visible from and directly accessible from the public street while parking and vehicle driveways are to the sides and rear of the site. As described previously, the project site is served by existing public sidewalks and City-designated Class III bicycle routes along both the Vintage Park Drive. The lack of dedicated bicycle facilities along both streets requires bicyclists to share the roadway with vehicles to access the project site.

The two proposed driveways at Chess Drive and Vintage Park Drive would be at street grade, which requires pedestrians traveling along the sidewalk to ramp down when crossing the driveways. To ensure adequate accessibility for people walking along Chess Drive and Vintage Park Drive, the proposed project would be required to comply with City requirements to provide either (1) sidewalk-grade driveways, consistency with applicable City standards or an approved standard from a neighboring jurisdiction at the Chess Drive and Vintage Park Drive driveways on the project site; or (2) curb ramps that are consistent with the City's accessibility standard at all driveways on the project site.

Construction of these features would ensure that potential impacts related to pedestrian facilities would be reduced to a less-than-significant level.

Parking and Loading. The proposed project would provide adequate loading spaces to meet City requirements. Although, the project does not meet the City's parking requirements, the number of parking spaces would be adequate for the parking demand; therefore, the project is not anticipated to create a parking shortfall.

2) Exceed an applicable VMT threshold of significance

Senate Bill 743 and the resulting *State CEQA Guidelines* update replace the use of LOS for determining transportation impacts with an evaluation of daily VMT. VMT is a measurement of the amount and distance that a person drives, accounting for the number of passengers within a vehicle. Many interdependent factors affect the amount and distance a person might drive. In particular, the type of built environment affects how many places a person can access within a given distance, time, and cost, using different ways of travel (e.g., private vehicle, public transit, bicycling, walking). Typically, low-density development at great distances from other land uses and in areas with few alternatives to the private vehicle provides less access than a location with high density, mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT per capita compared to a similarly sized development in urban areas. In general, higher VMT areas are associated with more air pollution, including GHG emissions, and energy usage than lower VMT areas. VMT is calculated by multiplying the number of trips generated by a project by the total distance of each of those trips.

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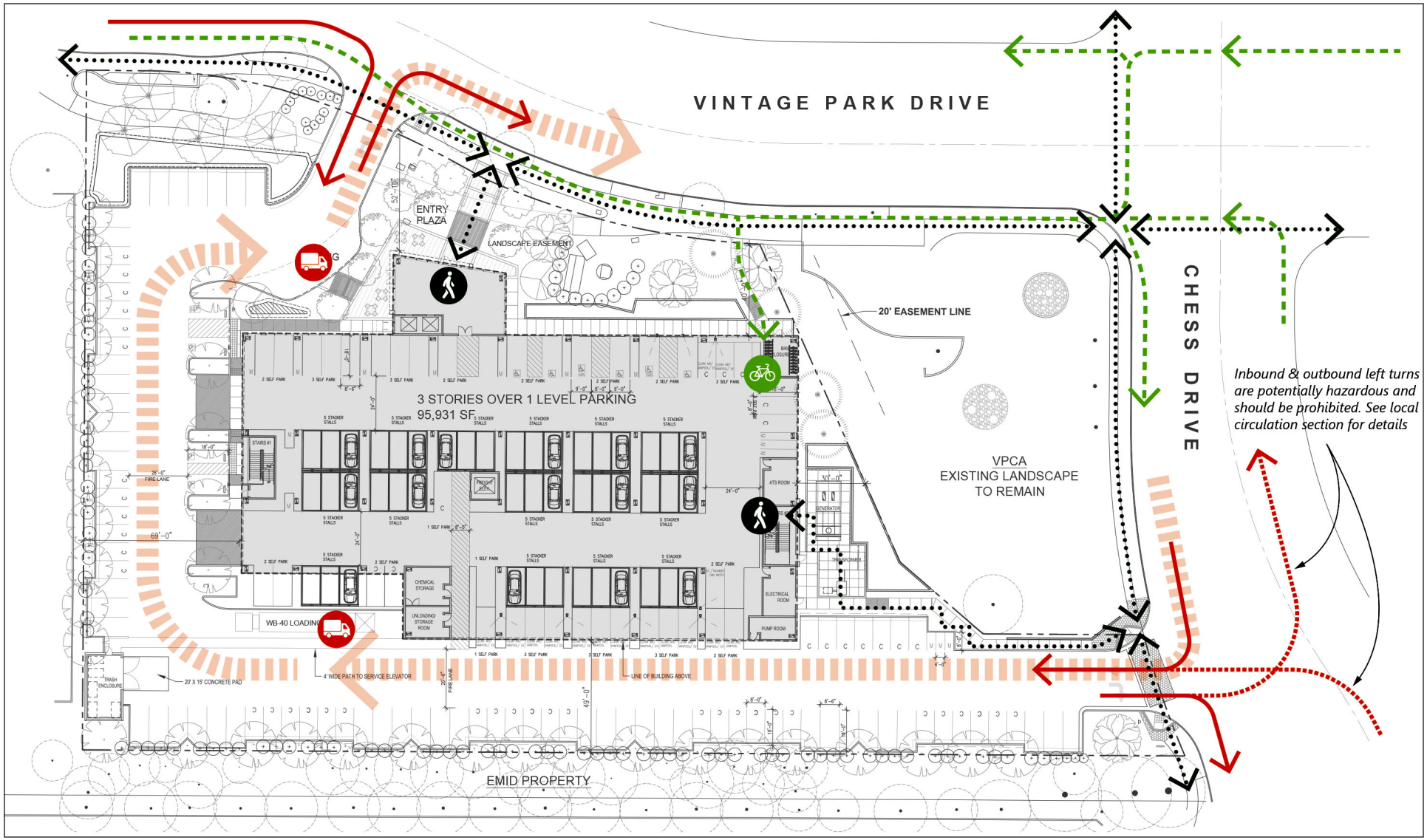

LSA

FIGURE 4.3-3

388 Vintage Park Drive Project EIR
Proposed Site Circulation

SOURCE: Fehr & Peers, December 14, 2021

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As previously discussed, the City has not yet adopted a citywide methodology or significance threshold for VMT impacts. Because the City has not yet adopted a VMT threshold, an interim project threshold was developed, as previously explained in Section 4.3.1.2 and further outlined in Appendix A of the TIA (Appendix C to this EIR).

A significant impact would occur should existing home-based work VMT per employee in the TAZ that encompasses the project result in greater than 14.3 VMT per employee under existing conditions. This is based on the threshold of 15 percent below the existing county-wide average of 16.8 VMT per employee. Table 4.3.D shows the average home-based work VMT per employee based on the C/CAG model in the 2015 base year (the year for which the most recent data is available).

Table 4.3.D: Home-Based Work VMT per Employee, by Location (2015 Estimates)

Location	HBW VMT per Employee
Threshold Geography Average (County of San Mateo)	16.8
VMT Threshold (15 percent below County of San Mateo)	14.3
Foster City Project Area (proposed project)	16.0
Proposed Project with 10% TDM Reduction	14.3
Expected Project Impact on VMT?	**No**

Source: Fehr & Peers (2021).
HBW = home-based work
TDM = transportation demand management
VMT = vehicle miles traveled

As previously described, the proposed project's TDM Plan would achieve a reduction in VMT of 10 percent. As shown in Table 4.3.D, implementation of the TDM Plan would reduce the average daily VMT per employee for the proposed project to 14.3, which is at the threshold of significance of 14.3. Therefore, with implementation of the proposed TDM Plan, the VMT generated by the proposed project would result in a less than significant impact.

3) Substantially increase hazards due to a design feature or incompatible uses

The proposed project would include two driveways that would be approximately in the same location as the existing driveways (Chess Drive and Vintage Park Drive) and no roadway geometry changes are proposed along adjacent roadways. As shown on Figure 4.3-4, sight distance at the proposed driveways is expected to be adequate for drivers turning right out of both driveways provided that vegetation within the sight triangles is pruned to maintain clear sight lines. However, both inbound and outbound left turns at the Chess Drive driveway are potentially hazardous due to roadway curvature and conflicts with vehicles entering the neighboring commercial uses. Except for the potentially hazardous inbound and outbound movement at the Chess Drive driveway, the proposed project is not expected to result in a substantial increase to hazards.

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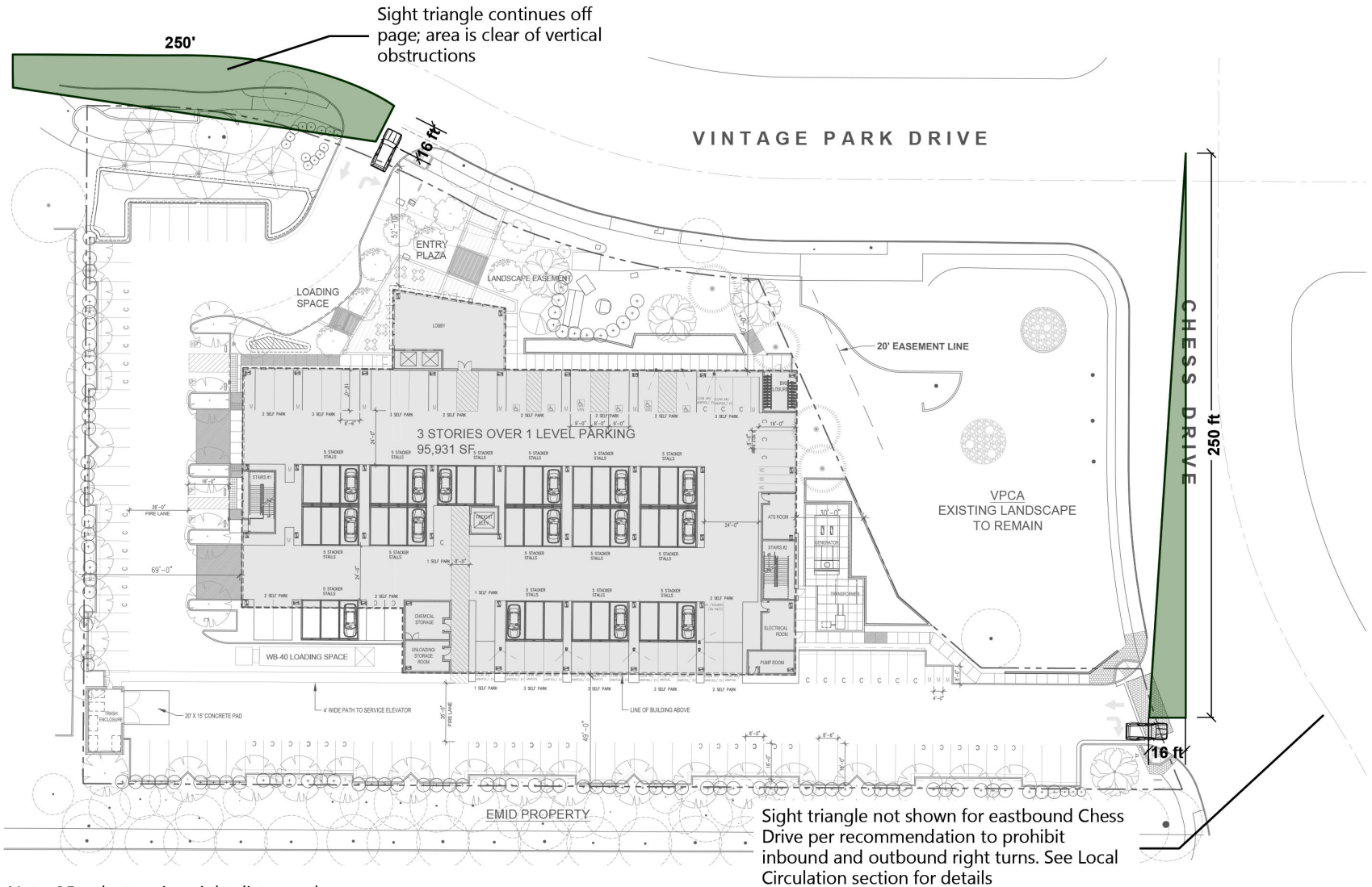

Note: 35mph stopping sight distance shown.

LSA

FIGURE 4.3-4

NOT TO SCALE

N

388 Vintage Park Drive Project EIR
Recommended Driveway Sight Distance

SOURCE: Fehr & Peers, December 14, 2021

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Impact TRA-1: Development of the proposed project would worsen an existing hazardous geometric design feature. (S).

Implementation of the proposed project would result in both inbound and outbound left turns at the project's Chess Drive driveway. Due to the existing roadway geometry, these turning movements are potentially hazardous.

Mitigation Measure TRA-1: Prior to the issuance of a building permit, the project sponsor shall revise the project plans to show either: (1) signage, markings, hardscape, or other suitable treatments to prohibit both inbound and outbound left turns at the existing Chess Drive driveway; or (2) roadway improvements with side-by-side center left turn lanes on Chess Drive that are separated by a hardscape median. A suggested conceptual configuration is shown in Figure 4.3-5 of the Draft EIR.

Implementation of Mitigation Measure TRA-1 would convert outbound movements at the Chess Drive driveway to right-out only. This modification would match the driveway across the street and reduce conflicting movements in a substandard two-way left-turn lane. Therefore, implementation of Mitigation Measure TRA-1 would reduce this impact to a less-than-significant level.

4) Result in inadequate emergency access

Vehicle trips generated by the proposed project would represent a very small percentage of overall daily and peak hour traffic on roadways and freeways in Foster City. During the PM peak hour, the proposed project would generate 85 vehicle trips which would be distributed to study intersections. Project-added vehicle trips represent less than 2 percent of entering volumes at study intersections during the PM peak hour. The proposed project does not include features that would alter emergency vehicle access routes or roadway facilities; fire and police vehicles would continue to have access to all facilities around the entire city. Upon construction, emergency vehicles would have full access to the project site. Therefore, the proposed project would not result in inadequate emergency access and impacts to emergency vehicle access would be less than significant.

4.3.2.4 Cumulative Impacts

This section discusses potential cumulative impacts to the transportation and circulation network in the study area. As summarized in this section, the proposed project, in combination with cumulative projects, would have less than significant impacts with respect to conflicts with applicable plans, VMT, hazards, and emergency access.

Conflicts with Applicable Plans, Ordinances, or Policies. Future development would be required to comply with existing regulations, including General Plan policies that have been prepared to minimize impacts related to transportation and circulation. The City, throughout the 2025 buildout horizon, would implement the General Plan programs that require the City to annually update the Capital Improvement Program to reflect City and community priorities for physical projects related to transportation for all travel modes.

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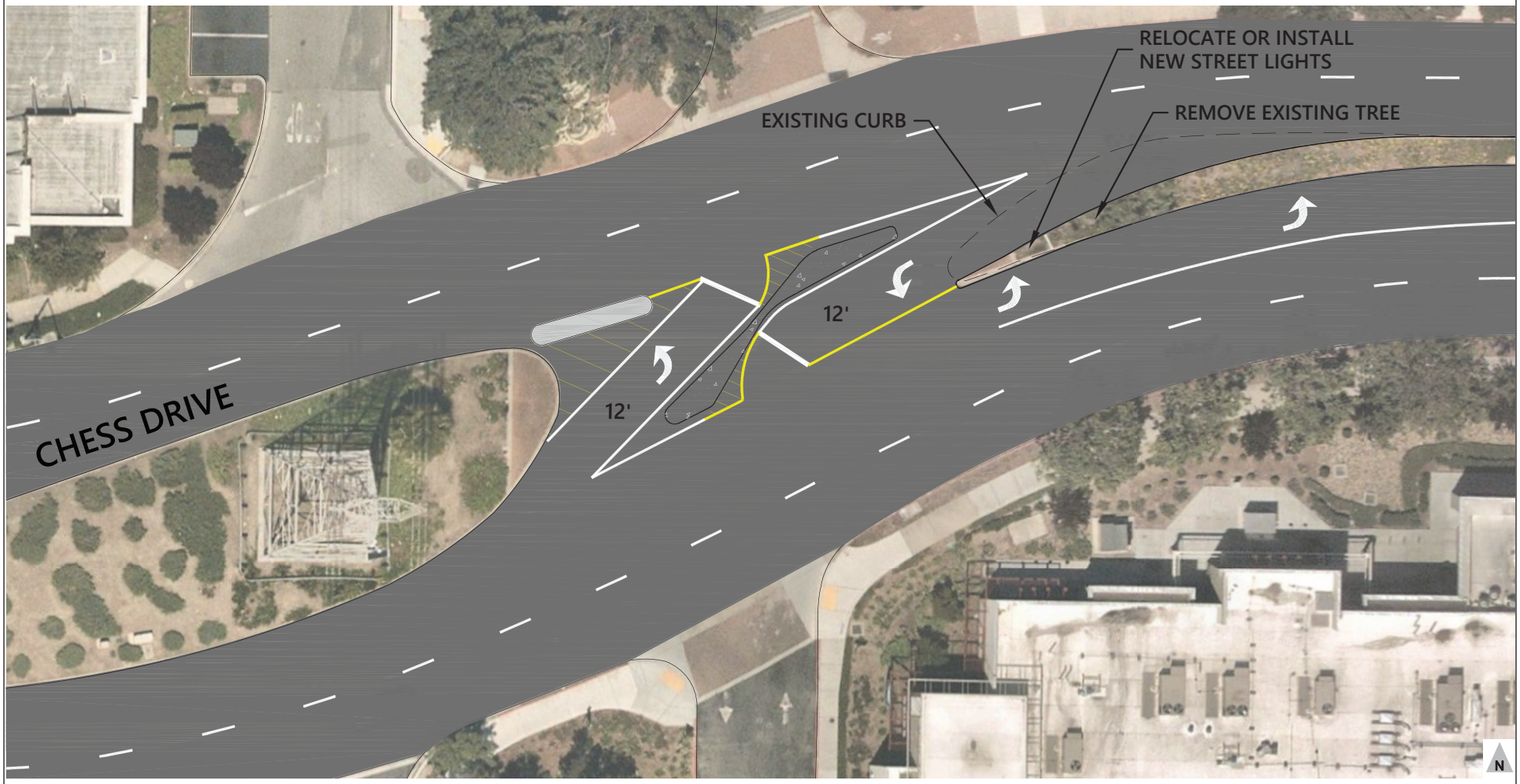

LSA

FIGURE 4.3-5

NOT TO SCALE N

388 Vintage Park Drive Project EIR
Recommended Chess Drive Roadway Configuration

SOURCE: Fehr & Peers, October 2021

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Therefore, for these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Vehicle Miles Traveled. Consistent with the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA, a project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." A project that falls below an efficiency-based threshold that aligns with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. The proposed project would generate less VMT compared to the existing countywide VMT, and, therefore, would be below the City's efficiency-based threshold. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to VMT.

Hazards or Incompatible Uses. Overall, cumulative land use development and transportation projects would promote accessibility for people walking to and through the site by conforming to General Plan policies and Zoning regulations, and by adhering to planning principles that emphasize providing convenient connections and safe routes for people walking, bicycling, driving, and taking transit. Additionally, as with current practice, projects would be designed and reviewed in accordance with the City's Public Works Department requirements and the department would provide oversight engineering review to ensure that the project is constructed according to City specifications. As a result, the cumulative projects would not generate activities that would increase hazards due to a design feature or incompatible use. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to design features or incompatible uses.

Emergency Access. Future development, as part of the City's project approval process, would be required to comply with existing regulations, including General Plan policies and zoning regulations that have been prepared to minimize impacts related to emergency access. The City, throughout the 2025 buildout horizon, would implement the General Plan programs that require the City's continued coordination with the Foster City Police Department and the San Mateo Consolidated Fire Department to establish circulation standards, adopt an emergency response route map, and equip all new traffic signals with pre-emptive traffic signal devices for emergency services. Furthermore, the implementation of the zoning regulations would help to minimize traffic congestion that could impact emergency access. For these reasons, the proposed project, in combination with cumulative projects, would have a less than significant cumulative impact with respect to emergency access.

4.3.3 Non-CEQA Analysis

4.3.3.1 Intersection Level of Service Analysis

The findings of the intersection LOS compliance analysis are presented in this section for informational purposes. The analysis scope and methodology, analysis scenarios, data collection, and LOS policy standards are detailed in Appendix C of this EIR. As stated above, LOS is no longer a CEQA threshold. However, the City's General Plan Policy LUC-F-1 requires that the TIA also analyze LOS for local planning purposes. The LOS analysis determines whether the project traffic would

cause an intersection's LOS to exceed the City's LOS thresholds or cause either the average delay or average critical delay to exceed the City's intersection delay thresholds under existing and cumulative conditions. These thresholds vary depending on the street classifications as well as whether the intersection is on a State route or not.

Existing Plus Project Conditions. Traffic operations were evaluated at the study intersections under existing conditions plus traffic generated by the proposed project. Table 4.3.E provides the LOS results for the study intersections during the AM and PM peak hours under Existing Plus Project Conditions. As shown, most of the intersections would operate at the same LOS under Existing Plus Project Conditions as compared to Existing Conditions, except the intersection of Chess Drive and the SR-92 westbound ramps during the PM peak hour, which would degrade from LOS D to LOS F.

Table 4.3.E: Existing Plus Project LOS and Delay Results

Intersection	Peak Period	Existing		Existing Plus Project	
		Delay (seconds)	LOS	Delay (seconds)	LOS
Chess Drive/SR-92 Westbound Ramps	AM	17	B	18	B
	PM	41	D	>80	F
Chess Drive/Foster City Boulevard	AM	22	C	23	C
	PM	>80	F	>80	F
Foster City Boulevard/Metro Center Boulevard	AM	32	C	33	C
	PM	66	E	66	E
Metro Center Boulevard/SR-92 Eastbound Ramps	AM	17	B	17	B
	PM	>80	F	>80	F

Source: Fehr & Peers (2021).
Note: Shaded cells indicates an exceedance of the Foster City standard of LOS D.
LOS = level of service
SR-92 = State Route 92

The LOS at Chess Drive/SR-92 westbound ramps would increase from LOS D to LOS F due to the addition of project-generated vehicle trips to the eastbound through movement on Chess Drive, which operates at capacity under existing conditions. Although the number of project trips to this movement is relatively small compared to the overall traffic volumes at this intersection, the additional delay incurred by each additional driver is very high due to the long intersection signal length and the short phase length for the eastbound through movement. Adjusting the signal timing by transferring an additional 3 seconds to the eastbound through movement from the westbound approach would reduce the average delay at this intersection to an acceptable LOS D.

As noted above, changes to LOS are not considered an environmental impact. Additionally, General Plan Policy LUC-F-1 notes that it will be necessary to accept level of service "E" or "F" at the SR-92 westbound ramps/Chess Drive. Therefore, the potential for project vehicle trips to increase delay at this location would not conflict with the City's adopted policies and no action on the part of the project is required. Further, this analysis result relies on conservative assumptions for the project trip assignment, where all vehicles traveling to traveling north to East Third Avenue or south on Foster City Boulevard would travel through the study intersections on Chess Drive by exiting to Vintage Park Drive and turning southbound left. Under congested conditions along Chess Drive,

these drivers would choose to take other, less congested routes. As for many destinations, there are multiple routes that a driver could take to reach or depart the project site, and the project-generated vehicle trips would disperse across the roadway network and generate less of an effect compared to what this analysis presents. The City will continue to monitor roadway conditions and signal operations as a part of routine maintenance and would adjust signal timings in the future as traffic conditions warrant.

Cumulative Conditions. This section presents a summary of the Cumulative (2040) Conditions. It includes a description of projects and transportation network changes that are assumed to be included under future Cumulative Conditions and the methodologies used to calculate future year volumes. It also presents the impacts associated with transportation that would result from the project for Cumulative Plus Project Conditions. Cumulative No Project Conditions form the baseline for comparison against the Cumulative Plus Project scenario.

The Cumulative (2040) No Project Conditions include construction of reasonably foreseeable development projects in the area. Table 4.3.F summarizes the projects that are considered reasonable and foreseeable and which are included under Cumulative Conditions.

Table 4.3.F: Cumulative (2040) Development

Project Name	Proposed Land Use
Pilgrim Triton	Construction of 332 dwelling units, 10,000 square feet of retail space, and 35,000 square feet of office space
Gilead Campus Master Plan	Construction of 1,044,000 square feet of office space
Foster Square	Construction of 152 senior dwelling units, 90 assisted living dwelling units, and 30,000 square feet of retail space
Lincoln Centre	Construction of 388,000 square feet of office space and 166,000 square feet of lab space
Charter Square School	Demolition of 58,000 square feet of retail; construction of a 600-student school
Chess Hatch Master Plan	Demolition of 190,000 square feet of office space; construction of 800,000 square feet of office space
Metro Center Hotel	Construction of 83,000 square feet of hotel space

Source: Fehr & Peers (2021).

In addition to development, future roadway improvements that are under consideration by the City are included in Cumulative (2040) No Project Conditions. Under Cumulative (2040) No Project Conditions, the intersection of Foster City Boulevard and Chess Drive would have the following geometry changes: (1) construction of a northbound right-turn lane; (2) construction of a second westbound through lane; (3) lengthening of the northbound left-turn lane; and (4) lengthening of the westbound left-turn lane.

Cumulative (2040) No Project traffic volumes include traffic estimates from the cumulative development projects summarized in Table 4.3.F as well as additional background growth associated with probable future development. Cumulative No Project volumes are based on trip generation for future development projects and distribution patterns included in the Foster City Multi-Project

Traffic Analysis and, as described in the Metro Center Hotel Project EIR,[12] Cumulative No Project volumes are based on Cumulative Plus Project volumes reported in the Metro Center Hotel Project EIR to include the effects of this reasonably foreseeable project. Cumulative Plus Project volumes in this study represent Cumulative No Project volumes plus project trips as described above.

Table 4.3.G provides the LOS results for the study intersections during the AM and PM peak hours under Cumulative (2040) No Project and Cumulative (2040) Plus Project conditions. As shown, all four intersections would continue to operate at unacceptable LOS F with the addition of project trips. However, average delay would not increase significantly with the addition of project trips at any intersection already operating unacceptably. Only the Foster City/Chess Drive intersection in the PM peak hour would increase delay by more than 10 seconds with the addition of project trips for similar reasons described under Existing Plus Project conditions. Similar to Existing Plus Project conditions, changes to LOS are not considered an environmental impact and the City's Policy LUC-F-1 notes that it will be necessary to accept level of service "E" or "F" at the SR-92 Westbound Ramps/Chess Drive. Therefore, the potential for project vehicle trips to increase delay at this location would not conflict with the City's adopted policies and no action on the part of the project sponsor is required.

Table 4.3.G: Existing Plus Project LOS and Delay Results

Intersection	Peak Period	Cumulative		Cumulative Plus Project	
		Delay (seconds)	LOS	Delay (seconds)	LOS
Chess Drive/SR-92 Westbound Ramps	AM	69	E	72	E
	PM	>80	F	>80	F
Chess Drive/Foster City Boulevard	AM	33	C	33	C
	PM	>80	F	>80	F
Foster City Boulevard/Metro Center Boulevard	AM	59	E	58	E
	PM	>80	F	>80	F
Metro Center Boulevard/SR-92 Eastbound Ramps	AM	48	D	52	D
	PM	>80	F	>80	F

Source: Fehr & Peers (2021).
Note: Shaded cells indicates an exceedance of the Foster City standard of LOS D.
LOS = level of service
SR-92 = State Route 92

4.3.3.2 Parking Assessment

Code Requirements. Chapter 17.62 of the Foster City Municipal Code (FCMC) requires new development projects to provide off-street loading and automobile, bicycle, and motorcycle parking facilities. Table 4.3.H shows these requirements. The proposed project includes 95,931 gross square feet of floor area and therefore would be required to provide 320 automobile parking spaces or an adjusted minimum of 256 stalls. The adjusted minimum accounts for two reductions permitted under the zoning code. First, a maximum 15 percent reduction is permitted with approval of a TDM plan that meets the conditions identified in FCMC Chapter 17.62.060(D)(3). Second, an additional 5

[12] Foster City, City of. 2020. *Metro Center Hotel Project Draft Environmental Impact Report.* State Clearinghouse No. 2019049065. March.

percent reduction is permitted based on credits for providing bicycle and motorcycle spaces as required in FCMC Chapter 17.62.060(D)(4).

Table 4.3.H: Off-Street Parking Requirements

Parking Standard		Required Parking
Automobile Parking		
Research and Development Facilities	1 spaces per 300 square feet of gross floor area	320
	Minimum number of stalls with all available adjustments	256
Motorcycle Parking		
All Commercial/Nonresidential Uses	1 percent of the total number of parking stalls provided	2
Bicycle Parking		
Short-Term	None Required	0
Long-Term	None Required	0

Source: Fehr & Peers (2021).

Parking Supply. The proposed project would include 210 automobile parking spaces, which is 110 stalls fewer than the 320-stall minimum or 46 stalls fewer than the adjusted minimum of 256. Consistent with Zoning Code section 17.62.100(A), the project sponsor may request a variance from the parking requirements. Therefore, provided that the Planning Commission grants the variance for the minimum number of automobile parking spaces, the proposed project would meet the Zoning Ordinance requirements for automobile parking. As shown in Table 4.3.H, the proposed project would be required to provide 2 motorcycle parking spaces. The proposed project would include 14 motorcycle parking spaces and therefore would meet the Zoning Ordinance requirements for automobile parking.

Parking Demand. Parking generation rates from the ITE Parking Generation Manual, 5th Edition, were used to estimate weekday parking demand at the project site by time of day. The Parking Generation Manual collects data on parking occupancy at different sites to estimate the average parking generation rate by land use category by time of day. Using the per employee parking generation rates for General Office (710), the proposed project would be expected to generate a peak hour demand of 179 parking stalls.[13] Based on this analysis, peak parking demand is anticipated to be less than the proposed parking supply.

4.3.3.3 C/CAG Compliance

Per the C/CAG Transportation Demand Management Policy Update Approach,[14] non-residential projects (office, industrial, and institutional) that are considered large projects, generating greater than 500 ADT, are required to develop a TDM plan that could reduce the project-generated ADT by 35 percent based on the vehicle trip reduction values assigned by C/CAG shown in Table 4.3.C. The percentages C/CAG used are for compliance with the countywide congestion management program, and thus do not match the estimated reduction to VMT described above. As shown in Table 4.3.C, the proposed project complies with C/CAG requirements.

13 This includes employee and visitor parking demand.

14 Advanced Mobility Group. 2021. *C/CAG Transportation Demand Management Policy Update Approach.* March.

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4.4 AIR QUALITY

This section has been prepared using methodologies and assumptions recommended in the air quality impact assessment guidelines of the Bay Area Air Quality Management District (BAAQMD).[1] In keeping with these guidelines, this section describes existing air quality, impacts of the proposed project on local carbon monoxide (CO) levels, impacts of vehicular emissions that have regional effects, and exposure of sensitive receptors to toxic air contaminants (TACs). Standard conditions of approval and/or mitigation measures to reduce or avoid potentially significant air quality impacts are identified, where appropriate. Air quality modeling data are included in Appendix D.

4.4.1 Setting

The following discussion provides an overview of existing air quality conditions in the region and in the city. Ambient air quality standards and the regulatory framework are summarized and climate, air quality conditions, and typical air pollutant types and sources are also described.

4.4.1.1 Air Pollutants and Health Effects

Both State and federal governments have established health-based ambient air quality standards for six criteria air pollutants: CO, ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the project area are O_3, CO, and suspended particulate matter. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as O_3 precursors such as nitrogen oxides (NO_x) and reactive organic gases (ROG).

Further, by its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to by itself result in nonattainment of ambient air quality standards. Instead, a project's

[1] Bay Area Air Quality Management District (BAAQMD). 2017. *California Environmental Quality Act, Air Quality Guidelines*. May.

individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. In developing thresholds of significance for air pollutants, the air districts have considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise. These populations are referred to as sensitive receptors.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in Table 4.4.A and are described in more detail below.

Ozone. O_3 is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_x. The main sources of ROG and NO_x, often referred to as O_3 precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the San Francisco Bay Area, automobiles are the single largest source of O_3 precursors. O_3 is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with O_3 production through the photochemical reaction process. O_3 causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited—it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Table 4.4.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Precursor sources:[a] motor vehicles, industrial emissions, and consumer products.	• Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter ($PM_{2.5}$)	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease. • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM_{10})	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death and hospitalization, primarily for worsening of respiratory disease. • Reduced visibility and material soiling.
Nitrogen Oxides (NO_x)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Lung irritation. • Enhanced allergic responses.
Carbon Monoxide (CO)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness.
Sulfur Oxides (SO_x)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	• Contaminated soil.	• Impaired mental functioning in children. • Learning disabilities in children. • Brain and kidney damage.
Toxic Air Contaminants (TACs)	• Cars and trucks (especially diesels). • Industrial sources, such as chrome platers. • Neighborhood businesses, such as dry cleaners and service stations. • Building materials and products.	• Cancer. • Reproductive and developmental effects. • Neurological effects.

Source: California Air Resources Board (2018).

[a] Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in diameter and $PM_{2.5}$ for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children.[2] Statewide attainment of particulate matter standards could reduce premature deaths, hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and episodes of respiratory illness in California.

Nitrogen Dioxide. NO_2 is a reddish-brown gas that forms as a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to O_3 formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high O_3 levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Pb is a metal found naturally in the environment as well as in manufactured products. The major sources of Pb emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of Pb emissions. The highest levels of Pb in air are generally found near Pb smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories. Twenty years ago, mobile sources were the main contributor to ambient Pb concentrations in the air. In the early 1970s, the United States Environmental Protection Agency (USEPA) established national regulations to gradually reduce the Pb content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of USEPA regulatory efforts to remove Pb from gasoline, emissions of Pb from the transportation sector and levels of Pb in the air decreased dramatically.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. Some examples of TACs include benzene, butadiene, formaldehyde,

[2] California Air Resources Board (CARB). 2020a. *Inhalable Particulate Matter and Health ($PM_{2.5}$ and PM_{10})*. Website: ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed August 2021).

and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the USEPA and the CARB. In 1998, the CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[3] High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

The BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide a quantitative estimate of health risks.[4] As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. Monitoring data and emissions inventories of TACs help the BAAQMD determine health risk to Bay Area residents.

Ambient monitoring concentrations of TACs indicate that pollutants emitted primarily from motor vehicles (1,3-butadiene and benzene) account for a substantial portion of the ambient background risk in the Bay Area.[5] According to the BAAQMD, ambient benzene levels declined dramatically in 1996 with the advent of Phase 2 reformulated gasoline. Due to this reduction, the calculated average cancer risk based on monitoring results has also been reduced.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways. Agricultural and mining equipment is not commonly used in urban parts of the Bay Area, while construction equipment typically operates for a limited time at various locations. As a result, the readily identifiable locations

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3 CARB. 2000b. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. October. Website: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed August 2021).

4 In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

5 BAAQMD. 2015. *Toxic Air Contaminant Control Program Annual Report, Volume 1.* May. Website: www.baaqmd.gov/research-and-data/air-toxics/annual-report (accessed August 2021).

where diesel particulate matter is emitted in the Bay Area include high-traffic roadways and other areas with substantial truck traffic.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[6] The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.[7] The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipates that by 2020, average statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the Diesel Risk Reduction Plan, meaning that the statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. It is likely that the Bay Area cancer risk from diesel particulate matter will decrease by a similar factor by 2020.

High-Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust from diesel, gasoline, and other combustion engines is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

4.4.1.2 National and State Ambient Air Quality Standards

Both State and federal governments have established health-based Ambient Air Quality Standards for criteria air pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health.

Both the USEPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and suspended particulate matter. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

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6 BAAQMD. 2015. *Toxic Air Contaminant Control Program Annual Report, Volume 1.* May. Website: www.baaqmd.gov/research-and-data/air-toxics/annual-report (accessed August 2021).

7 CARB. 2000c. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Prepared by the Stationary Source Division and Mobile Source Control Division. October. Website: www.arb.ca.gov/diesel/documents/rrpFinal.pdf (accessed August 2021).

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.[8] Table 4.4.B lists State and federal standards for the criteria air pollutants.

4.4.1.3 Existing Climate and Air Quality

The following provides a discussion of the local and regional air quality and climate in the Foster City area.

Regional and Local Air Quality. Foster City is in the middle of the San Francisco Bay Area Air Basin (Air Basin), a large, shallow air basin ringed by hills that taper into a number of sheltered valleys around the perimeter. Two primary atmospheric outlets exist. One is through the strait known as the Golden Gate, a direct outlet to the Pacific Ocean. The second extends to the northeast, along the west delta region of the Sacramento and San Joaquin rivers.

The city is within the jurisdiction of the BAAQMD, which regulates air quality in the Bay Area. Air quality conditions in the Bay Area have improved significantly since the BAAQMD's creation in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Neither State nor national ambient air quality standards of the following chemicals have been violated in recent decades: NO_2, SO_2, sulfates, lead, hydrogen sulfide, and vinyl chloride. Those exceedances of air quality standards that do occur primarily happen during meteorological conditions conducive to high pollution levels, such as cold, windless nights or hot, sunny summer afternoons.

O_3 levels, measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the BAAQMD and other regional, State and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the Bay Area still exceeds the State standard for 1-hour O_3 as well as the State and federal 8-hour standards. Levels of PM_{10} often exceed State standards, and the area is considered a nonattainment area for this pollutant relative to the State standards. The Bay Area is an unclassified area for the federal PM_{10} standard.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The Bay Area is currently considered a maintenance area for State and federal CO standards.

[8] United States Environmental Protection Agency. 2017. Criteria Air Pollutants. October. Website: www.epa.gov/criteria-air-pollutants (accessed August 2021).

Table 4.4.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a]		Federal Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
Ozone (O_3)[h]	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.07 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10})[i]	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)[i]	24-Hour	–		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)[j]	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	–	
Lead (Pb)[l,m]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[l]	Same as Primary Standard	
	Rolling 3-Month Average [i]	–		0.15 µg/m^3		
Sulfur Dioxide (SO_2)[k]	24-Hour	0.04 ppm (105 µg/m3)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)[k]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[k]	–	
Visibility-Reducing Particles [l]	8-Hour	See footnote [n]	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride [j]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: Ambient Air Quality Standards (California Air Resources Board 2016).

Table notes continued on the following page

[a] California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact USEPA for further clarification and current national policies.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[e] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[f] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[g] Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

[h] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[i] On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[j] To attain the 1-hour national standard, the three-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[k] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[l] The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[m] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

[n] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppb = parts per billion
ppm = parts per million
USEPA = United States Environmental Protection Agency

Local Climate and Air Quality. Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Two meteorological factors affect air quality in Foster City: wind and temperature. Winds affect the direction of transport of any air pollution emissions and wind also controls the volume of air into which the pollution mixes in a given period of time. While winds govern horizontal mixing processes, temperature inversions determine the vertical mixing depth of air pollutants.

Foster City is in San Mateo County, which lies in the middle of the San Francisco Peninsula, south of San Francisco, and north of Santa Clara and Santa Cruz counties. San Mateo County is bounded by the Pacific Ocean to the west and San Francisco Bay to the east. Cool, foggy weather is prevalent along the western coast of the peninsula, particularly during the summer. Summertime average daily temperatures are moderate along the west coast and warm in the county's east side. In the winter, average daily temperatures across the county range from mild to moderate. Winds are mild, with the highest wind speeds focused along the western coast. Rainfall averages about 20 to 25 inches per year at lower elevations and up to 36 inches in the Santa Cruz Mountains.[9]

O_3 and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the Bay Area. O_3 is primarily a problem in the summer, and fine particle pollution in the winter.[10]

In San Mateo County, O_3 almost never exceeds health standards, and $PM_{2.5}$ exceeds the national standard only on about 1 day each year. San Mateo County frequently receives fresh marine air from the Pacific Ocean, which passes over the coastal hills. In winter, $PM_{2.5}$ may be transported into San Mateo County from other parts of the Bay Area, adding to wood smoke, which may lead to elevated concentrations, but these are rarely high enough to exceed health standards.[11]

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and maintained by the local air pollution control district and State air quality regulating agencies. The USEPA uses ambient air data collected at permanent monitoring stations to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). Attainment areas are required to maintain their status through moderate, yet effective, air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment such as marginal, moderate, serious, severe, and extreme are used to classify each air basin in the state on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data. The San Francisco Bay Area Air Basin's attainment status for each criteria pollutant is listed in Table 4.4.C.

9 BAAQMD. 2019. *Climate and Air Quality in San Mateo County.* February 14, 2019. Website: www.baaqmd.gov/about-the-air-district/in-your-community/san-mateo-county (accessed August 2021).

10 Ibid.

11 Ibid.

Table 4.4.C: San Francisco Bay Area Basin Attainment Status

	Averaging Time	California Standards [a]		National Standards [b]	
		Concentration	Attainment Status	Concentration [c]	Attainment Status
Ozone (O_3)	8-Hour	0.070 ppm (137µg/m^3)	Nonattainment [l]	0.070 ppm	Nonattainment [d]
	1-Hour	0.09 ppm (180 µg/m^3)	Nonattainment	Not Applicable	[e]
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment [f]
	1-Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	1-Hour	0.18 ppm (339 µg/m^3)	Attainment	0.100 ppm [k]	[k]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Not Applicable	0.053 ppm (100 µg/m^3)	Attainment
Sulfur Dioxide (SO_2) [l]	24-Hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	[l]
	1-Hour	0.25 ppm (655 µg/m^3)	Attainment	0.075 ppm (196 µg/m^3)	[l]
	Annual Arithmetic Mean	Not Applicable	Not Applicable	0.030 ppm (80 µg/m^3)	[l]
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	Nonattainment [g]	Not Applicable	Not Applicable
	24-Hour	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Nonattainment [g]	15 µg/m^3 [o]	Unclassified/ Attainment
	24-Hour	Not Applicable	Not Applicable	35 µg/m^3 [j]	Nonattainment
Sulfates	24-Hour	25 µg/m^3	Attainment	Not Applicable	Not Applicable
Lead (Pb) [m]	30-Day Average	1.5 µg/m^3	Not Applicable	Not Applicable	Attainment
	Calendar Quarter	Not Applicable	Not Applicable	1.5 µg/m^3	Attainment
	Rolling 3-Month Average [n]	Not Applicable	Not Applicable	0.15 µg/m^3	[n]
Hydrogen Sulfide	1-Hour	0.010 ppm (26 µg/m^3)	Unclassified	Not Applicable	Not Applicable
Vinyl Chloride (chloroethene)	24-Hour	0.010 ppm (26 µg/m^3)	No Information Available	Not Applicable	Not Applicable
Visibility Reducing Particles	8-Hour (10:00 to 18:00 PST)	[h]	Unclassified	Not Applicable	Not Applicable

Source: Bay Area Attainment Status (Bay Area Air Quality Management District 2017b).

Table notes continued on the following page

[a] California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

[b] National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the three-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than 150 µg/m^3. The 24-hour $PM_{2.5}$ standard is attained when the three-year average of 98th percentiles is less than 35 µg/m^3.
Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the three-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the three-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.

[c] National air quality standards are set by USEPA at levels determined to be protective of public health with an adequate margin of safety.

[d] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. USEPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.

[e] The national 1-hour ozone standard was revoked by USEPA on June 15, 2005.

[f] In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.

[g] In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

[h] Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

[i] The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005, and became effective on May 17, 2006.

[j] On January 9, 2013, USEPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This USEPA rule suspends key SIP requirements as long as monitoring data continue to show that the Bay Area attains the standard. Despite this USEPA action, the Bay Area will continue to be designated as “non-attainment” for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a “redesignation request” and a “maintenance plan” to USEPA and USEPA approves the proposed redesignation.

[k] To attain this standard, the three-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). The USEPA expects to make a designation for the Bay Area by the end of 2017.

[l] On June 2, 2010, the USEPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the three-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030-ppm annual and 0.14-ppm 24-hour SO_2 NAAQS however must continue to be used until one year following USEPA initial designations of the new 1-hour SO_2 NAAQS. USEPA expects to make designation for the Bay Area by the end of 2017.

[m] CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure below which there are no adverse health effects determined.

[n] National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

[o] In December 2012, USEPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter (µg/m^3). In December 2014, USEPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated “unclassifiable/attainment” must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

µg/m^3 = micrograms per cubic meter
CARB = California Air Resources Board
mg/m^3 = milligrams per cubic meter
ppm = parts per million
USEPA = United States Environmental Protection Agency

The CARB and the USEPA maintain ambient air quality monitoring stations within California. The air quality monitoring station closest to the project site is the 897 Barron Avenue monitoring station in Redwood City, which monitors criteria air pollutant data.[12] The air quality trends from this station are used to represent the ambient air quality in the project area. Table 4.4.D shows ambient air quality in the project area from 2018 to 2020 (the most recent available period). The pollutants monitored were CO, O_3, $PM_{2.5}$, and NO_2. Air quality trends for PM_{10} and SO_2 are not monitored in San Mateo County; therefore, the air quality trends for PM_{10} and SO_2 are from the 156B Jackson Street monitoring station in San Jose.

Pollutant monitoring results indicate that air quality in the San Mateo County area has generally been good. As indicated in the monitoring results, 1-hour O_3 concentrations exceeded the State standard in 2020 and the 8-hour O_3 concentrations exceeded the State and federal standards twice in 2019 and once in 2020. In addition, the federal PM_{10} standard was exceeded four times in 2018 and 2019 and an unknown number of times in 2020. In addition, the federal $PM_{2.5}$ standard was exceeded 13 times in 2018 and an unknown number of times in 2020. The CO, NO_2, and SO_2 standards were not exceeded in this area during the 3-year period.

In addition, the Office of Environmental Health Hazard Assessment, on behalf of the California Environmental Protection Agency, released Version 3.0 of the California Communities Environmental Health Screening Tool (CalEnviroScreen) in January 2017. CalEnviroScreen identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution. Pollution Burden scores for each census tract derive from the average percentiles of the seven Exposure indicators (O_3 and $PM_{2.5}$ concentrations, diesel PM emissions, drinking water contaminants, pesticide use, toxic releases from facilities, and traffic density) and the five Environmental Effects indicators (cleanup sites, impaired water bodies, groundwater threats, hazardous waste facilities and generators, and solid waste sites and facilities). According to the CalEnviroScreen 3.0 Map,[13] the project site has a pollution burden percentile of 39. Other portions of the Bay Area have pollution burdens ranging from the lowest scores of between 1 and 10 percent and the second highest score of between 81 and 90 percent. In addition, according to the SB 535 Disadvantaged Communities Map,[14] the project site is not designated as an SB 535 disadvantaged community.

12 CARB gathers ambient air quality data for the State of California and ensures the quality of these data. CARB provides ambient air quality monitoring sites throughout California's counties and air basins.

13 Office of Environmental Health Hazard Assessment. 2017. *CalEnviroScreen 3.0.* Website: oehha.ca.gov/calenviroscreen/report/calenviroscreen-30 (accessed August 2021).

14 OEHHA. 2018. *SB 535 Disadvantaged Communities using CalEnviroScreen 3.0 results.* June. Website: oehha.maps.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4 (accessed August 2021).

Table 4.4.D: Ambient Air Quality at the 897 Barron Avenue, Redwood City Monitoring Station

Pollutant	Standard	2018	2019	2020
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		2.5	2.0	2.1
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.7	1.1	1.5
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.067	0.083	0.098
Number of days exceeded:	State: > 0.09 ppm	0	0	ND
Maximum 8-hour concentration (ppm)		0.050	0.077	0.077
Number of days exceeded:	State: > 0.07 ppm	0	2	1
	Federal: > 0.07 ppm	0	2	1
Coarse Particulates (PM_{10})[1]				
Maximum 24-hour concentration (µg/m^3)		121.8	77.1	134.0
Number of days exceeded:	State: > 50 µg/m^3	4	4	ND
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		23.1	19.1	ND
Exceeded for the year:	State: > 20 µg/m^3	Yes	No	ND
	Federal: > 50 µg/m^3	No	No	ND
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hour concentration (µg/m^3)		120.9	29.5	124.1
Number of days exceeded:	Federal: > 35 µg/m^3	13	0	ND
Annual arithmetic average concentration (µg/m^3)		10.5	7.0	9.8
Exceeded for the year:	State: > 12 µg/m^3	No	No	No
	Federal: > 15 µg/m^3	No	No	No
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.077	0.055	0.046
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.010	0.009	0.008
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)[a]				
Maximum 1-hour concentration (ppm)		0.0069	0.0145	0.0029
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 24-hour concentration (ppm)		0.0011	0.0015	0.0008
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0001	0.0001	0.0002
Exceeded for the year:	Federal: > 0.030 ppm	No	0	0

Source: California Air Resources Board and U. S. Environmental Protection Agency (2021).

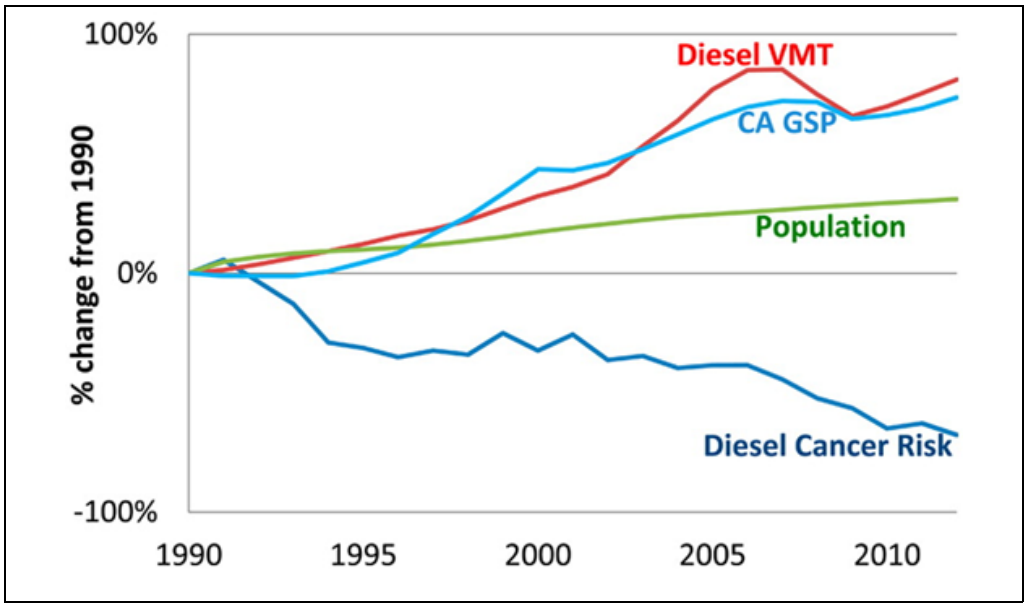
[a] Data taken at the 156B Jackson Street air quality monitoring station in San Jose.

µg/m^3 = micrograms per cubic meter

ND = No data. There were insufficient (or no) data results to determine the value.

ppm = parts per million

Toxic Air Contaminant Trends. In 1984, the CARB adopted regulations to reduce TAC emissions from mobile and stationary sources, as well as consumer products. A CARB study showed that ambient concentrations and emissions of the seven TACs responsible for the most cancer risk from airborne exposure declined by 76 percent between 1990 and 2012.[15] Concentrations of diesel particulate matter, a key TAC, declined by 68 percent between 1990 and 2012, despite a 31 percent increase in State population and an 81 percent increase in diesel vehicle miles traveled, as shown on Figure 4.4-1. The study also found that the significant reductions in cancer risk to California residents from the implementation of air toxics controls are likely to continue.



Source: Ambient and Emission Trends of Toxic Air Contaminants in California (Propper, Ralph, et al. 2015).

Figure 4.4-1: California Population, Gross State Product (GSP), Diesel Cancer Risk, and Diesel Vehicle Miles Traveled (VMT) Regulatory Context

The USEPA and the CARB regulate direct emissions from motor vehicles. The BAAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

4.4.1.4 Regulatory Framework

The BAAQMD is primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as for monitoring ambient pollutant concentrations. BAAQMD's jurisdiction encompasses seven counties – Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa—and portions of

[15] Propper, Ralph, et al. 2015. Ambient and Emission Trends of Toxic Air Contaminants in California. *American Chemical Society: Environmental Science & Technology*. Website: pubs.acs.org/doi/full/10.1021/acs.est.5b02766 (accessed August 2021).

Solano and Sonoma counties. The USEPA and the CARB regulate direct emissions from motor vehicles.

The following discusses the applicable federal, State, regional, and local regulatory framework.

Federal Regulations. At the federal level, the USEPA has been charged with implementing national air quality programs. USEPA air quality mandates are drawn primarily from the federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required USEPA to establish primary and secondary NAAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. USEPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness, and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

State Regulations. The CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), adopted in 1988. The CCAA requires that all air districts in the State achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from transportation and air-wide emission sources, and provides districts with the authority to regulate indirect sources.

The CARB is also primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. The CARB is primarily responsible for statewide pollution sources and produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. The CARB combines these data and submits the completed SIP to USEPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for mobile sources, consumer products, small utility engines, and off-road vehicles. The CARB Diesel Risk Reduction Plan is intended to substantially reduce diesel

particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel—a step already implemented—and cleaner-burning diesel engines.[16]

Because of the robust evidence relating proximity to roadways and a range of non-cancer and cancer health effects, the CARB also created guidance for avoiding air quality conflicts in land use planning in its *Air Quality and Land Use Handbook: A Community Health Perspective*.[17] In its guidance, the CARB advises that new sensitive uses (e.g., residences, schools, day care centers, playgrounds, and hospitals) not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day, or within 1,000 feet of a distribution center (warehouse) that accommodates more than 100 trucks or more than 90 refrigerator trucks per day.

The CARB guidance suggests that the use of these guidelines be customized for individual land use decisions and take into account the context of proposed development projects. The Air Quality and Land Use Handbook specifically states that these recommendations are advisory and acknowledges that land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

Regional Regulations. The BAAQMD seeks to attain and maintain air quality conditions in the San Francisco Bay Area Air Basin through a comprehensive program of planning, regulation, enforcement, technical innovation, and education. The clean air strategy includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. The BAAQMD also inspects stationary sources and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by law.

Clean Air Plan. The Clean Air Plan guides the region's air quality planning efforts to attain the CAAQS.[18] The BAAQMD 2017 Clean Air Plan, which was adopted on April 19, 2017, by the BAAQMD Board of Directors, is the current Clean Air Plan which contains district-wide control measures to reduce O_3 precursor emissions (e.g., ROG and NO_x), particulate matter and greenhouse gas (GHG) emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities

16 California Air Resources Board. 2000b, op. cit.

17 California Environmental Protection Agency and California Air Resources Board. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April. Website: www.arb.ca.gov/ch/handbook.pdf (accessed August 2021).

18 BAAQMD. 2017c. *Final 2017 Clean Air Plan*. April 19. Website: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed August 2021).

- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050

- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve GHG reduction targets

- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents, such as particulate matter, O_3, and toxic air contaminants; to reduce emissions of methane and other "Super-GHGs" that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion

BAAQMD CARE Program. The Community Air Risk Evaluation (CARE) program began in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. Risk reduction activities associated with the CARE program focus on the most at-risk communities in the Bay Area.

For commercial and industrial sources, the BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment (HRA) to determine what sources and pollutants to control as well as the degree of control. An HRA is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances to provide a quantitative estimate of health risks.[19] As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. The BAAQMD has identified seven impacted communities;[20] Foster City has not been identified as an affected community.[21]

[19] In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

[20] The seven impacted communities include Richmond/San Pablo; eastern San Francisco, including Treasure Island; San Jose; western Alameda County; Concord, Vallejo; and Pittsburg/Antioch.

[21] BAAQMD. 2014. *Community Air Risk Evaluation Program*. August 20. Website: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program (accessed August 2021).

BAAQMD CEQA Air Quality Guidelines. The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In June 2010, the BAAQMD adopted updated draft CEQA Air Quality Guidelines and finalized them in May 2011. These guidelines superseded previously adopted agency air quality guidelines of 1999 and were intended to advise lead agencies on how to evaluate potential air quality impacts.

In May 2017, the BAAQMD published an updated version of the CEQA Guidelines. The BAAQMD CEQA Guidelines include thresholds to evaluate project impacts to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the proposed project.

City of Foster City. The City of Foster City (City) addresses air quality in the Conservation Element of the General Plan.[22] In addition, the City has standard Conditions of Approval (COAs) that would apply to the proposed project.

Foster City General Plan. The Conservation Element sets goals, policies, and programs that work to reduce the impact of development on local air quality. The following programs are applicable to the proposed project.

- **Program C-j: Air Quality Impacts.** Review proposed projects for their potential to affect air quality conditions.
- **Program C-k: Air Pollution Sensitive Land Uses.** To the extent feasible, separate air pollution sensitive land uses from sources of air pollution.
- **Program C-l TSM: Ordinance Enforcement.** Enforce the City's Transportation Systems Management (TSM) Ordinance for existing and proposed businesses with more than 25 employees to promote use of SamTrans, vanpools, carpools and flextime working hours for employees.
- **Program C-m: Reduction in Automobile Trips.** Encourage Foster City residents and employees to consolidate and/or eliminate motor vehicle trips as often as possible.
- **Program C-n: Coordination with Other Agencies in Air Quality Improvements.** Coordinate review of large projects with local, regional and state agencies to improve air quality.

[22] Foster City, City of. 2003. *City of Foster City General Plan, Conservation Element*. May.

- **Program C-o: Title 24.** Construct new buildings and additions to energy efficiency standards according to Title 24 of the California State Model Code.

Foster City Standard Conditions of Approval. The following COAs adopted by the City require implementation of dust controls during project construction:

- **COA 9.5:** The following controls shall be implemented at all construction sites within the project to control dust and/or mud production and fugitive dust.
    - Water all active construction areas at least twice daily and more often during windy periods; active areas adjacent to existing sensitive land uses shall be kept damp at all times, or shall be treated with nontoxic stabilizers to control dust;
    - Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard;
    - Pave, apply water three times daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites;
    - Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites; and
    - Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
    - Blowing dust shall be reduced by timing construction activities so that paving and building construction begin as soon as possible after completion of grading, and by landscaping disturbed soils as soon as possible.
    - Water trucks shall be present and in use at the construction site.
    - All portions of the site subject to blowing dust shall be watered as often as deemed necessary by the City in order to insure proper control of blowing dust for the duration of the project.
    - Watering on public streets shall not occur.
    - All vehicle speeds on unpaved roads shall be limited to 15 mph.
    - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
    - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne

toxics control measure Title 13, Section 2485 of California Code of Regulations (CCR). 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 visible emissions evaluator.
- Streets will be cleaned by street sweepers or by hand as often as deemed necessary by the City Engineer.
- Watering associated with on-site construction activity shall take place between the hours of 8:00 a.m. and 7:00 p.m. and shall include at least one late-afternoon watering to minimize the effects of blowing dust.
- All public streets and medians soiled or littered due to this construction activity shall be cleaned and swept on a daily basis during the workweek to the satisfaction of the City.
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

4.4.2 Impacts and Mitigation Measures

This section provides an assessment of the potential impacts related to air quality that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds for determining whether an impact is significant. The latter part of this section presents potential impacts associated with implementation of the proposed project and identifies applicable COAs and/or mitigation measures, as appropriate.

4.4.2.1 Significance Criteria

The project would result in a significant impact related to air quality if it 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 is nonattainment 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.

According to the BAAQMD CEQA Guidelines, to meet air quality standards for criteria air pollutant and air precursor impacts, the proposed project must not:

- Contribute to CO concentrations exceeding the State ambient air quality standards;
- Generate average daily construction emissions of ROG, NO_x or $PM_{2.5}$ (exhaust) greater than 54 pounds per day or PM_{10} exhaust emissions greater than 82 pounds per day; or
- Generate operational emissions of ROG, NO_x or $PM_{2.5}$ of greater than 10 tons per year or 54 pounds per day or PM_{10} emissions greater than 15 tons per year or 82 pounds per day.

4.4.2.2 Project Impacts

The following section discusses the potential air quality impacts associated with implementation of the proposed project.

1) Conflict with or obstruct implementation of the applicable air quality plan

The applicable air quality plan is the BAAQMD's 2017 Bay Area Clean Air Plan (Clean Air Plan).[23] The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines control strategies to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce GHG emissions to protect the climate. Consistency with the Clean Air Plan can be determined if a project (1) supports the goals of the Clean Air Plan, (2) includes applicable control measures from the Clean Air Plan, and (3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan. Following is an evaluation of the proposed project's consistency with each of these criteria and, as discussed below, the proposed project would not conflict with the Clean Air Plan goals or control measures and would not obstruct its implementation. Therefore, this impact would be less than significant.

Clean Air Plan Goals. The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health in the Bay Area, and reduce GHG emissions and protect the climate.

The BAAQMD has established significance thresholds for project construction and operational impacts at a level at which the cumulative impact of exceeding these thresholds would have an adverse impact on the region's attainment of air quality standards. The health and hazards thresholds were established to help protect public health. As discussed in more detail in the analysis below, implementation of the proposed project would result in less-than-significant operation-period emissions and, with implementation of COA 9.5, the project would result in less-than-significant construction-period emissions. Therefore, the project would not conflict with the Clean Air Plan goals.

Clean Air Plan Control Measures. The control strategies of the Clean Air Plan include measures in the following categories: Stationary Source Measures, Transportation Measures, Energy Measures, Building Measures, Agriculture Measures, Natural and Working Lands Measures,

[23] Bay Area Air Quality Management District. 2017c. *Clean Air Plan.* April 19.

Waste Management Measures, Water Measures, and Super-GHG Pollutants Measures. The following discusses the proposed project's consistency with each of these strategies.

Stationary Source Control Measures. The Stationary Source Measures, which are designed to reduce emissions from stationary sources such as metal melting facilities, cement kilns, refineries, and glass furnaces, are incorporated into rules adopted by the BAAQMD and then enforced by BAAQMD Permit and Inspection programs. Because the proposed project would not include any such stationary sources, the Stationary Source Measures of the Clean Air Plan are not applicable to the project.

Transportation Control Measures. The BAAQMD identifies Transportation Measures as part of the Clean Air Plan to decrease emissions of criteria pollutants, TACs, and GHGs by reducing demand for motor vehicle travel, promoting efficient vehicles and transit service, decarbonizing transportation fuels, and electrifying motor vehicles and equipment. The proposed project would develop life science office uses that would locate employees near existing office, commercial, hotel, light industrial, residential, park, and institutional uses, reducing the demand for travel by single occupancy vehicles. The proposed project would also develop a Transportation Demand Management (TDM) plan to provide trip reduction measures and reduce vehicle traffic in and around the project site (refer to Section 4.3, Transportation). In addition, public transit facilities serve the project area and the proposed project would provide bicycle and pedestrian facilities, which would also help to reduce the demand for travel by single occupancy vehicles. The proposed project would also include electric vehicle (EV) parking. Therefore, the project would promote BAAQMD initiatives to reduce vehicle trips and vehicle miles traveled and would increase the use of alternate means of transportation.

Energy Control Measures. The Clean Air Plan also includes Energy Measures, which are designed to reduce emissions of criteria air pollutants, TACs, and GHGs by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used by switching to less GHG intensive fuel sources for electricity generation. Because these measures apply to electrical utility providers and local government agencies (and not individual projects), the Energy Control Measures of the Clean Air Plan are not applicable to the proposed project. However, the proposed project would comply with current California Green Building Standards Code (CALGreen) guidelines and would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence. The proposed project would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, and advanced water and energy metering. Therefore, the proposed project would comply with applicable Energy Measures.

Building Control Measures. The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the strategies in the control measures for this sector focus on working with local governments that do have authority over local building codes, to facilitate adoption of best GHG control practices and policies. Therefore, the Building Control Measures of the Clean Air Plan are not applicable to the proposed project. However, the proposed project would comply with CALGreen standards.

Agriculture Control Measures. The Agriculture Control Measures are designed to primarily reduce emissions of methane. Because the project does not include any agricultural activities, the Agriculture Control Measures of the Clean Air Plan are not applicable to the project.

Natural and Working Lands Control Measures. The Natural and Working Lands Control Measures focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban tree plantings. Because the proposed project does not include the disturbance of any rangelands or wetlands, the Natural and Working Lands Control Measures of the Clean Air Plan are not applicable to the project.

Waste Management Control Measures. The Waste Management Measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The proposed project would comply with local requirements for waste management (e.g., recycling and composting services). Therefore, the project would be consistent with the Waste Management Control Measures of the Clean Air Plan.

Water Control Measures. The Water Control Measures focus on reducing emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. Because these measures apply to POTWs and local government agencies (and not individual projects), the Water Control Measures are not applicable to the proposed project.

Super GHG Control Measures. Super GHGs include GHGs with very high global-warming potential, such as methane, black carbon, and fluorinated gases. The Super-GHG Control Measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Because these measures do not apply to individual projects, the Super-GHG Control Measures are not applicable to the proposed project.

Clean Air Plan Implementation. As discussed above, the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the proposed project would not disrupt or hinder implementation of a control measure from the current Clean Air Plan and this impact would be less than significant.

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

The BAAQMD is currently designated as a nonattainment area for State and national O_3 standards and national particulate matter ambient air quality standards. BAAQMD nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air

pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

The following sections describe the proposed project's construction- and operation-related air quality impacts and CO impacts.

Construction Emissions. During construction of the proposed project, short-term degradation of air quality may occur due to the release of particulate matter emissions (e.g., fugitive dust) generated by demolition, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter.

Site preparation and project construction would involve demolition, grading, paving, and other activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts. The City has established COA 9.5, which requires implementation of dust controls during project construction and would reduce construction-related air quality impacts of PM_{10} and $PM_{2.5}$ fugitive dust emissions, consistent with BAAQMD Basic Construction Mitigation Measures.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROGs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those

vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod version 2020.4.0, consistent with BAAQMD recommendations. As stated in Chapter 3, Project Description, the proposed project would include demolition of the existing building and surface parking lot on the project site, resulting in approximately 180 tons of demolition waste, which was included in CalEEMod. Construction of the proposed project is anticipated to begin in March 2022 and last 17 months. The proposed project is anticipated to be fully operational and occupied by late 2023. Other construction details are not yet known; therefore, default assumptions (e.g., construction equipment and worker and truck trips) from CalEEMod were used. This analysis assumes the use of Tier 2 construction equipment, which is proposed by the project. Construction-related emissions are presented in Table 4.4.E. CalEEMod output sheets are included in Appendix D.

Table 4.4.E: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	2.8	14.6	0.5	0.5	0.5	0.1
BAAQMD Thresholds	54.0	54.0	82.0	BMPs	54.0	BMPs
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (August 2021)
BAAQMD = Bay Area Air Quality Management District
BMP = best management practices
NO_x = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in aerodynamic diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in aerodynamic diameter
ROG = reactive organic gases

As shown in Table 4.4.E, construction ROG, NO_x, and $PM_{2.5}$ and PM_{10} exhaust emissions would be below the BAAQMD's thresholds. To reduce construction $PM_{2.5}$ and PM_{10} fugitive dust impacts to a less-than-significant level, the BAAQMD requires the implementation of BAAQMD Basic Construction Mitigation Measures. As identified above, the City has established COA 9.5, which requires implementation of dust controls during project construction and would reduce construction-related air quality impacts of PM_{10} and $PM_{2.5}$ fugitive dust emissions, consistent with BAAQMD Basic Construction Mitigation Measures. With implementation of COA 9.5, construction-related air quality impacts would be less than significant.

Operational Emissions. Long-term air pollutant emission impacts that would result from the proposed project are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g., emergency generator).

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement, and the vehicle wakes generate airborne

dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles.

Energy source emissions result from activities in buildings for which electricity is used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. As identified in Chapter 3, Project Description, the proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for EV charging, and enhanced indoor air quality strategies including advanced ventilation.

Typically, area source emissions consist of direct sources of air emissions at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment and the use of consumer products.

Long-term operational emissions associated with the proposed project were calculated using CalEEMod. Trip generation rates used in CalEEMod for the project were based on the project's trip generation estimates, which assume the proposed project would typically generate 699 average daily trips (refer to Table 4.3.B in Section 4.3, Transportation, for trip generation estimates). In addition, the proposed project would comply with current CALGreen standards, which was included in the CalEEMod modeling assumptions. In addition, the proposed project would include an emergency generator within the ground level of the parking garage, which was included in CalEEMod.[24] When project-specific data were not available, default assumptions from CalEEMod were used to estimate project emissions. Model results are shown in Table 4.4.F. CalEEMod output sheets are included in Appendix D.

The primary emissions associated with the project are regional in nature, meaning that air pollutants rapidly disperse on release or, in the case of vehicle emissions associated with the project, emissions are released in other areas of the Air Basin. The daily and annual emissions associated with project operational trip generation, energy, area, and stationary sources are identified in Table 4.4.F for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table 4.4.F indicate the project would not exceed the significance criteria for ROG, NO_2, PM_{10} or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality, and mitigation measures would not be required. This impact would be less than significant.

[24] A 250-kilowatt (335 horsepower) back-up generator would be installed for emergency use only and would run 1 hour per week for testing.

Table 4.4.F: Project Operational Emissions

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Pounds Per Day				
Area Source Emissions	2.4	<0.1	<0.1	<0.1
Energy Source Emissions	0.1	0.6	<0.1	<0.1
Mobile Source Emissions	1.9	2.1	3.6	1.0
Stationary Source Emissions	0.1	0.2	<0.1	<0.1
Total Emissions	**4.4**	**3.0**	**3.7**	**1.0**
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceeds Threshold?	**No**	**No**	**No**	**No**
Tons Per Year				
Area Source Emissions	0.4	<0.1	<0.1	<0.1
Energy Source Emissions	<0.1	0.1	<0.1	<0.1
Mobile Source Emissions	0.2	0.3	0.5	0.1
Stationary Source Emissions	<0.1	<0.1	<0.1	<0.1
Total Emissions	**0.7**	**0.4**	**0.5**	**0.1**
BAAQMD Thresholds	10.0	10.0	15.0	10.0
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (August 2021).
BAAQMD = Bay Area Air Quality Management District
NO_X = nitrogen oxides
PM_{10} = Particulate Matter Less than 10 Microns in Aerodynamic Diameter
$PM_{2.5}$ = Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter
ROG = reactive organic gases

Localized CO Impacts. Emissions and ambient concentrations of CO have decreased dramatically in the Bay Area with the introduction of the catalytic converter in 1975. No exceedances of the State or federal CO standards have been recorded at Bay Area monitoring stations since 1991. BAAQMD CEQA Guidelines include recommended methodologies for quantifying concentrations of localized CO levels for proposed development projects.

A screening level analysis using guidance from the BAAQMD CEQA Guidelines was performed to determine the impacts of the project. The screening methodology provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less than significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project 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, or below-grade roadway).

The Air Basin has been designated attainment under both the national and California AAQS for CO. Therefore, the proposed project would not have the potential to substantially increase CO hotspots at intersections in Foster City.

Implementation of the proposed project would not conflict with the San Mateo County Transportation Authority's congestion management program for designated roads or highways, a regional transportation plan, or other agency plans. As further discussed in Section 4.3, Transportation, the proposed project would generate approximately 79 a.m. and 85 p.m. peak-hour trips; therefore, the project's contribution to peak-hour traffic volumes at intersections in the vicinity of the project site would be well below 44,000 vehicles per hour. Therefore, the proposed project would not result in localized CO concentrations that exceed State or federal standards and this impact would be less than significant.

3) Expose sensitive receptors to substantial pollutant concentrations

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. The closest sensitive receptors to the project site include multi-family residences located along Bridgepointe Circle, approximately 675 feet west of the project site.

According to the BAAQMD, a project would result in a significant impact related to TAC exposure if it would: individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10 in 1 million, increased non-cancer risk of greater than 1 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). A significant cumulative impact would occur if the project, in combination with other projects within a 1,000-foot radius of the project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100 in 1 million, an increased non-cancer risk of greater than 10 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ on an annual average basis. Potential impacts associated with the proposed project are discussed below.

Project Construction – Toxic Air Contaminants. As identified above, the closest sensitive receptors to the project site are the multifamily residences along Bridgepointe Circle, approximately 675 feet west of the project site. Construction of the proposed project may expose these nearby sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement COA 9.5 described above. With implementation of COA 9.5, project construction pollutant emissions would be below the BAAQMD significance thresholds. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during project construction, and mitigation measures would not be required. This impact would be less than significant.

Project Operation – Toxic Air Contaminants. Although the emissions from project operations are not expected to exceed the BAAQMD's numeric regional mass daily emission thresholds, this does not in itself constitute a less than significant health impact within the Air Basin.

The BAAQMD's project level thresholds are based in part on Section 180(e) of the Clean Air Act. The project level thresholds are intended to provide a means of consistency in significance determination within the environmental review process.

Notwithstanding, simply exceeding the BAAQMD's project level thresholds does not constitute a particular health impact to a nearby individual. The reason for this is that the project level thresholds are in pounds/day and tons/year emitted into the air, whereas health effects are determined based on the concentration of a pollutant in the air at a particular location (e.g., parts per million [ppm] by volume of air or $\mu g/m^3$of air). CAAQS and NAAQS were developed to protect the most susceptible population groups from adverse health effects and were established in terms of ppm or $\mu g/m^3$ for the applicable emissions.

The daily and annual emissions associated with project operational trip generation, energy, and area sources are identified in Table 4.4.F for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The results shown in Table 4.4.F indicate the project would not exceed the significance criteria for ROG, NO_x, PM_{10} or $PM_{2.5}$ emissions. The increase in emissions associated with the proposed project would be a small fraction of the Air Basin's emissions.

Therefore, the emissions associated with implementation of the proposed project would not be expected to exceed the most stringent applicable NAAQS or CAAQS for NO_x, $PM_{2.5}$, and PM_{10}. It should be noted that the AAQS are developed and represent levels at which the most susceptible persons (children and the elderly) are protected. In other words, the AAQS are purposefully set low to protect children, the elderly, and those with existing respiratory problems.

Furthermore, air quality trends for emissions of NO_x, ROG, and O_3 (which is a byproduct of NO_x and ROG) have been trending downward within the Air Basin even as development has increased over the last several years. Therefore, implementation of the proposed project is not expected to result in any Air Basin-wide increase in health effects. As such, impacts are considered less than significant.

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

During construction, the various diesel powered vehicles and equipment in use on-site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered less than significant.

Odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. The BAAQMD considers a significant odor impact as a substantial number of odor complaints, specifically, more than five confirmed

complaints per year average over the past 3 years. Examples of land uses that have the potential to generate considerable odors include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants.

The proposed life science office uses are not expected to produce any offensive odors that would result in frequent odor complaints. Therefore, implementation of the proposed project would not create objectionable odors affecting a substantial number of people and impacts would be less than significant.

4.4.2.3 Cumulative Impacts

According to the BAAQMD, regional air pollution is largely a cumulative impact. No single project is sufficient in size to independently create regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

The BAAQMD is currently designated as a nonattainment area for State and national O_3 standards and national particulate matter ambient air quality standards. BAAQMD nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Therefore, if the proposed project's daily average or annual emissions of construction- or operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a considerable contribution to a cumulatively significant impact. As shown in Table 4.4.E and Table 4.4.F, implementation of the proposed project would not generate significant construction or operational emissions. As shown in the project-specific air quality impacts discussion above, the proposed project would not result in individually significant impacts and therefore the proposed project would not result in a cumulatively considerable contribution to regional air quality impacts. Cumulative impacts would be considered less than significant.

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4.5 GREENHOUSE GAS EMISSIONS

This section summarizes existing greenhouse gas (GHG) emissions and discusses global climate change, its causes, and the contribution of human activities. This section also estimates the likely GHG emissions that would result from construction and operational activities associated with development of the proposed project, including vehicular traffic, energy consumption and other emission sources. Standard conditions of approval and/or mitigation measures to reduce or avoid potentially significant impacts are identified, where appropriate. The analysis performed for this section is based on Bay Area Air Quality Management District (BAAQMD) CEQA Air Quality Guidelines.[1]

4.5.1 Setting

The following describes existing GHG emissions in Foster City, beginning with typical GHG types and sources, impacts of global climate change, the regulatory framework surrounding these issues, and current emission levels.

4.5.1.1 Background

The following section provides background information on GHGs and global climate change.

Global Climate Change. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose 0.6 ± 0.2° Celsius or 1.1 ± 0.4° Fahrenheit in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.[2] GHGs are present in the atmosphere naturally, are released by natural sources, or form from secondary reactions taking place in the atmosphere. The following gases are widely seen as the principal contributors to human-induced global climate change:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

1 Bay Area Air Quality Management District (BAAQMD). 2017a. *CEQA Air Quality Guidelines.* May.

2 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, GHGs like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHG results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively only to the six gases listed above.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalent" (CO_2e). Table 4.5.A shows the GWP for each type of GHG. For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

Table 4.5.A: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: *Climate Change 2007: The Physical Science Basis* (Intergovernmental Panel on Climate Change 2007).
HFC = hydrofluorocarbon

The following summarizes the characteristics of the six GHGs and black carbon. Black carbon also contributes to climate change and is therefore discussed below.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral

production, and deforestation. Natural sources release approximately 150 billion tons of CO_2 each year, far outweighing the 7 billion tons of man-made emissions of CO_2 each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO_2, and consequently, the gas is building up in the atmosphere.

In 2018, total annual CO_2 emissions in California were approximately 351.9 million tons, accounting for approximately 83 percent of California's overall GHG emissions.[3] Transportation is the single largest source of CO_2 in California, approximately 47 percent, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO_2 emissions in California.

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands and oceans. Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation in dairy cows, manure management, and rice cultivation are also significant sources of CH_4 in California. Total annual emissions of CH_4 in California are approximately 39.8 million tons, accounting for approximately 9 percent of GHG emissions in California in 2018.

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. Nitrous oxide emissions accounted for approximately 3 percent of GHG emissions in California in 2018.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[4] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry has resulted in greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 5 percent of GHG emissions in California in 2018.[5]

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3 California Air Resources Board (CARB). 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed August 2021).

4 The Montreal Protocol is an international treaty that was approved on January 1, 1989 and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

5 CARB. 2021. op cit.

Black Carbon. Black carbon is the most strongly light-absorbing component of particulate matter (PM) formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of particulate matter less than 2.5 microns in size ($PM_{2.5}$) and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO_2.[6] Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global-warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including wildfires, although residential heating and industry also contribute. Black carbon emissions in the U.S. are projected to decline substantially by 2030, largely due to controls on new mobile diesel emissions.[7]

Effects of Global Climate Change. Effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme weather events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems. Heat-related problems include heat rash and heat stroke. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global climate change may also result in impacts to local air quality from increased ground-level ozone and particulate matter.[8] Additionally, according to the 2006 California Climate Action Team (CAT) Report,[9] the following climate change effects, which are based on trends established by the United Nations Intergovernmental Panel on Climate Change (IPCC) and summarized in Table 4.5.B, can be expected in California over the course of the next century:

- The loss of sea ice and mountain snow pack, resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures;

- Rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets;

6 United States Environmental Protection Agency (USEPA). 2017. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed August 2021).

7 Ibid.

8 USEPA. 2020a. Air Quality and Climate Change Research. Website: https://www.epa.gov/air-research/air-quality-and-climate-change-research (accessed August 2021).

9 California Environmental Protection Agency (CalEPA). 2006a. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

- Changes in weather that include widespread changes in precipitation, ocean salinity, wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones;[10]

- Decline of the Sierra Nevada snowpack, which accounts for approximately one-half of the surface water storage in California by 70 percent to as much as 90 percent over the next 100 years;

- Increase in the number of days conducive to ozone (O_3) formation by 25 to 85 percent (depending on the future temperature scenario) in high O_3 areas of Los Angeles and the San Joaquin Valley by the end of the 21st century; and

- High potential for erosion of California's coastlines and seawater intrusion into the Sacramento-San Joaquin River Delta and levee systems due to the rise in sea level.

Emissions Inventories. An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions. Worldwide emissions of GHGs in 2018 totaled 25.6 billion metric tons of CO_2e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.[11]

United States Emissions. In 2018, the year for which the most recent data are available, the United States emitted about 6,677.8 million metric tons of CO_2e (MMT CO_2e). The total 2018 CO_2e emissions represent a 3.7 percent increase from 1990 to 2018, down from a high of 15.2 percent above 1990 levels in 2007. Overall, net emissions in 2018 increased 3.2 percent since 2017 and decreased 10.2 percent from 2005 levels. Of the six major sectors—residential, commercial, agricultural, industry, transportation, and electricity generation—transportation accounted for the highest amount of GHG emissions in 2018 (approximately 27.9 percent), with electricity generation second at 26.9 percent and emissions from industry third at 22.2 percent.[12]

10 Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis, Summary for Policymakers. February.

11 United Nations Framework Convention on Climate Change. 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed August 2021).

12 USEPA. 2020b. Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018. Website: www.epa.gov/sites/production/files/2020-02/documents/us-ghg-inventory-2020-main-text.pdf (accessed August 2021).

Table 4.5.B: Potential Impacts of Global Warming and Expected Consequences for California

Potential Water Resource Impacts	Anticipated Consequences Statewide
Reduction of the State's average annual snowpack	• The decline of the Sierra snowpack would lead to a loss in half of the surface water storage in California by 70% to 90% over the next 100 years • Potential loss of 5 million acre-feet or more of average annual water storage in the State's snowpack • Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply • Higher surface evaporation rates with a corresponding increase in tropospheric water vapor
Rise in average sea level	• Potential economic impacts related to coastal tourism, commercial fisheries, coastal agriculture, and ports • Increased risk of flooding, coastal erosion along the State's coastline, seawater intrusion into the Sacramento-San Joaquin River Delta (Delta) and levee systems
Changes in weather	• Changes in precipitation, ocean salinity, and wind patterns • Increased likelihood for extreme weather events, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones
Changes in the timing, intensity, location, amount, and variability of precipitation	• Potential increased storm intensity and increased potential for flooding • Possible increased potential for droughts • Long-term changes in vegetation and increased incidence of wildfires • Changes in the intensity and timing of runoff • Possible increased incidence of flooding and increased sedimentation • Sea level rise and inundation of coastal marshes and estuaries • Increased salinity intrusion into the Delta • Increased potential for Delta levee failure • Increased potential for salinity intrusion into coastal aquifers (groundwater) • Increased potential for flooding near the mouths of rivers due to backwater effects
Increased water temperatures	• Increased environmental water demand for temperature control • Possible increased problems with foreign invasive species in aquatic ecosystems • Potential adverse changes in water quality, including the reduction of dissolved oxygen levels • Possible critical effects on listed and endangered aquatic species
Changes in urban and agricultural water demand	• Changes in demand patterns and evapotranspiration
Increase in the number of days conducive to O_3 formation	• Increased temperatures • Potential health effects, including adverse impacts to respiratory systems

Source: *Environmental Water Account Draft Supplemental EIS/EIR to the Environmental Water Account Final EIS/EIR, Bureau of Reclamation Mid-Pacific Region*, Sacramento, California (United States Department of the Interior October 2007).
EIR = Environmental Impact Report
EIS = Environmental Impact Statement
O_3 = ozone

State of California Emissions. The State emitted approximately 425 MMT CO_2e emissions in 2018, 8 MMT CO_2e higher than 2017 levels and 6 MMT CO_2e below the 2020 GHG Limit of 431 MMT CO_2e.[13] The California Air Resources Board (CARB) estimates that transportation was the source of approximately 40 percent of the State's GHG emissions in 2018, followed by industrial sources at 21 percent and electricity generation at 15 percent. The remaining sources of GHG emissions were agriculture at 8 percent, residential activities at 6 percent, commercial activities at 4 percent, high GWP at 5 percent, and waste at 2 percent.[14]

San Francisco Bay Area Emissions. In 2015, 85 MMT CO_2e of GHGs were emitted in the Bay Area.[15] The transportation sector (including on-road motor vehicles, locomotives, ships and boats, and aircraft) contributed 41 percent of GHG emissions and stationary sources (including oil refineries and natural gas combustion) contributed 26 percent of GHG emissions in the Bay Area. Energy production activities such as electricity generation and co-generation were the third largest contributor with approximately 14 percent of the total GHG emissions. Buildings contributed 10 percent, fluorinated gases contributed 4 percent, waste contributed 3 percent, and agriculture contributed 1 percent of the total GHG emissions.

City of Foster City Emissions. As shown in Table 4.5.C below, in 2005, Foster City emitted 274,722 metric tons of CO_2e (MT CO_2e) most of which was the result of transportation (60 percent) and building energy use (39 percent).[16]

Table 4.5.C: Foster City Greenhouse Gas Emissions Inventory

Pollutant	Percent Contribution	MT CO_2e/Year
Residential Building Energy Use	16	44,594
Commercial Building Energy Use	23	62,674
Transportation – Local Roads	21	56,890
Transportation – State Highways	35	94,976
Transportation – Off-Road Equipment	4	11,435
Generated Waste	1	4,153
Total	**100**	**274,722**

Source: Foster City Climate Action Plan (City of Foster City September 2015).
MT CO_2e = metric tons of carbon dioxide equivalent

4.5.1.2 Regulatory Framework

This section describes applicable regulations related to GHG emissions at the federal, State, regional, and local level.

13 CARB. 2020d. *2000-2018 GHG Inventory (2020 Edition)*. Website: https://ww2.arb.ca.gov/ghg-inventory-data (accessed August 2021).

14 Ibid.

15 BAAQMD. 2017c. *Final 2017 Clean Air Plan*. April 19, 2017. Website: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed August 2021).

16 City of Foster City, 2015. *Foster City Climate Action Plan.* September.

Federal Regulations. The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the United States Environmental Protection Agency (USEPA) has the authority to regulate CO_2 emissions under the federal Clean Air Act. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

State Regulations. The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002). In a response to the transportation sector's significant contribution to California CO_2 emissions, Assembly Bill (AB) 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of Clean Air Act Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025.

Executive Order S-3-05 (2005). Executive Order S-3-05 was signed by the governor on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010.
- GHG emissions should be reduced to 1990 levels by 2020.
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the governor and State Legislature disclosing the progress made toward greenhouse emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads the Climate Action Team (CAT), composed of representatives from State agencies as well as numerous other boards and departments. CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the governor and State Legislature was released in March 2006 and it presented 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The most recent CAT Report to the Governor and State legislature was released in December 2010.

Assembly Bill 32 (2006), California Global Warming Solutions Act. California's major initiative for reducing GHG emissions is AB 32, passed by the State Legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 MMT CO_2e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008 and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT of CO_2e, or approximately 30 percent, from the State's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10 percent from 2002 to 2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e)
- The Low-Carbon Fuel Standard (15.0 MMT CO_2e)
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e)
- A renewable portfolio standard for electricity production (21.3 MMT CO_2e)

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high-speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO_2e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry

out AB 32. The CARB also approved a more robust California Environmental Quality Act (CEQA) equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade program took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

The CARB has not yet determined what amount of GHG reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, the CARB is also developing an additional protocol for community emissions). The CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. With regard to land use planning, the Scoping Plan expects an approximately 5 MMT CO_2e reduction due to implementation of Senate Bill (SB) 375 (discussed later in this subsection).

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed the CARB and the CAT to identify a list of "discrete early action GHG reduction measures" that could be adopted and made enforceable by January 1, 2010. On January 18, 2007, the governor signed Executive Order S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard. The Executive Order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs the CARB to consider the Low Carbon Fuel Standard as a discrete early action measure. In 2011, the United States District Court for the Eastern District of California issued an injunction preventing implementation of the Low Carbon Fuel Standard, ruling that it is unconstitutional. In 2012, the Ninth Circuit Court of Appeal stayed the District Court's injunction, allowing implementation of the Low Carbon Fuel Standard. The Ninth Circuit decided to uphold the Low Carbon Fuel Standard.

In June 2007, the CARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on GWP Refrigerants, and Landfill CH_4 Capture).[17] Discrete early action measures are measures that were required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code Section 38560.5. The CARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF_6 reductions from the nonelectricity sector. The combination of early action measures is estimated to reduce statewide GHG emissions by nearly 16 MMT.[18]

17 CARB. 2007a. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

18 CARB. 2007b. "ARB approves tripling of early action measures required under AB 32," News Release 07-46. October 25.

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in Executive Orders S-3-05 and B-16-2012. The First Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan, and it also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32.[19] The 2030 target is to reduce GHG emissions to 40 percent below 1990 levels by 2030.

Senate Bill 97 (2007). SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code, Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the State Office of Planning and Research to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the *State CEQA Guidelines* in January 2010, which went into effect in March 2010. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

Senate Bill 375 (2008). Signed into law on October 1, 2008, SB 375 supplements GHG reductions from new vehicle technology and fuel standards with reductions from more efficient land use patterns and improved transportation. Under the law, the CARB approved GHG reduction targets in February 2011 for California's 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations (MPOs). The CARB may update the targets every 4 years and must update them every 8 years. MPOs in turn must demonstrate how their plans, policies and transportation investments meet the targets set by the CARB through Sustainable Community Strategies (SCS). The SCS are included with the Regional Transportation Plan, a report required by State law. However, if an MPO finds that its SCS will not meet the GHG reduction target, it may prepare an Alternative Planning Strategy (APS). The APS identifies the impediments to achieving the targets.

19 CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

Executive Order B-30-15 (2015). The governor signed Executive Order B-30-15 on April 29, 2015, which added the immediate target:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. The CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act. SB 350, signed by the governor on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California's renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other nonrenewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to State energy agencies under existing law. The addition made by this legislation requires State energy agencies to plan for and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197. In summer 2016 the Legislature passed, and the governor signed, SB 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in the April 2015 Executive Order B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving the 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO_2e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by the CARB was posted in December 2016.

Senate Bill 100 (SB 100). On September 10, 2018, the Governor signed SB 100, which raises California's Renewable Portfolio Standard requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a State policy that eligible renewable

energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045. Under the bill, the State cannot increase carbon emissions elsewhere in the Western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18. Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs the CARB to work with relevant State agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Title 24, Building Standards Code and CALGreen Code. In November 2008, the California Building Standards Commission established the California Green Building Standards (CALGreen) Code, which sets performance standards for residential and nonresidential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2016 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2017.

Cap and Trade. The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program CARB developed took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through 2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. California is working closely with British Columbia, Ontario, Québec, and Manitoba through the Western Climate Initiative to develop harmonized cap-and-trade programs that will deliver cost-effective emission reductions. Two

lawsuits have been filed against cap-and-trade, but the cap-and-trade program will be implemented as-is until further notice.[20]

Executive Order N-79-20. Executive Order N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-State sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

Regional Regulations. Regional regulations that are applicable to GHG emissions generated by the proposed project are implemented by the Metropolitan Transportation Commission, the Association of Bay Area Governments, and BAAQMD, as discussed below.

Plan Bay Area 2050. Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. As required by SB 375, all metropolitan regions in California must complete an SCS as part of a Regional Transportation Plan. In the Bay Area, the Metropolitan Transportation Commission and the Association of Bay Area Governments are jointly responsible for developing and adopting a SCS that integrates transportation, land use and housing to meet GHG reduction targets set by the CARB. Plan Bay Area 2050 includes 35 strategies to improve housing, the economy, transportation, and the environment. These strategies enable the plan to be evaluated by its performance in areas identified as key regional concerns, including equitable access, economic vitality and transportation system effectiveness.

Bay Area Air Quality Management District. The BAAQMD is the regional government agency that regulates sources of air pollution within the nine Bay Area counties. The BAAQMD regulates GHG emissions through the following plans, programs, and guidelines.

Clean Air Plan. The Clean Air Plan guides the region's air quality planning efforts to attain the CARB's California Ambient Air Quality Standards.[21] The BAAQMD 2017 Clean Air Plan, which the BAAQMD Board of Directors adopted on April 19, 2017, is the current Clean Air Plan that contains district-wide control measures to reduce ozone precursor emissions (e.g., reactive organic gases and nitrogen oxide [NO_x]), particulate matter and GHG emissions. The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD's plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities
- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious GHG reduction targets for 2030 and 2050

[20] CARB. 2014. Cap-and-Trade Program. Website: www.arb.ca.gov/cc/capandtrade/capandtrade.htm (accessed August 2021).

[21] BAAQMD. 2017a. op. cit.

- Provides a regional climate protection strategy that will put the Bay area on a pathway to achieve GHG reduction targets

- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "Super Greenhouse Gases" that are potent climate pollutants in the near term; and to decrease emissions of CO_2 by reducing fossil fuel combustion.

BAAQMD Climate Protection Program. The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the Air Basin. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing GHG emissions and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders.

BAAQMD CEQA Air Quality Guidelines. The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and GHG emissions.

In June 2010, the BAAQMD adopted updated draft CEQA Air Quality Guidelines and finalized them in May 2011. These guidelines superseded previously adopted agency air quality guidelines of 1999 and were intended to advise lead agencies on how to evaluate potential air quality impacts.

In May 2017, the BAAQMD published an updated version of the CEQA Air Quality Guidelines. The CEQA Air Quality Guidelines include thresholds to evaluate project impacts to protectively evaluate the potential effects of the project on air quality. These protective thresholds are appropriate in the context of the size, scale, and location of the project.

Under the CEQA Air Quality Guidelines, a local government may prepare a Qualified Greenhouse Gas Reduction Strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy and General Plan that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emissions under CEQA. The CEQA Air Quality Guidelines also included a quantitative threshold for project level analyses based on estimated greenhouse emissions as well as per capita metrics.

City of Foster City. The City of Foster City (City) addresses global climate change and GHG emissions in the General Plan, Climate Action Plan, and Building Codes. In addition, the City has standard Conditions of Approval that would apply to the proposed project.

General Plan. The General Plan sets goals, policies, and programs that relate to GHG emissions and energy use in the Land Use and Circulation Element and Conservation Element. The following policies and programs are applicable to the proposed project.

- **Policy LUC-E-6: Create Opportunities for Transit Access.** Create opportunities to improve transit and access to regional transit with new or modified development, as appropriate.

- **Program LUC-F-2-a: Implementation of Traffic Reduction Programs.** As appropriate, require new non-residential developments to include a traffic reduction strategy with a variety of methods to reduce single-occupancy vehicles, provided programs exist.

- **Policy LUC-G-2: Preferred Parking/Electric Plug-In.** Encourage businesses, developers, and property managers to create preferred parking for electric and alternative fuel vehicles and study the installation of electric charging stations for plug-in vehicles.

- **Program LUC-H-1-a: Green Building Guidelines and Incentives.** The City will support the use of green building practices by:

  a. Providing information, marketing, training, and technical assistance about green building practices;

  b. Considering guidelines for green building practices in residential and commercial development; and

  c. Implementing sustainable practices where feasible in public buildings and spaces

- **Policy LUC-H-5: Tree and Landscape Planting.** Look for opportunities throughout the City to increase tree and landscape planting or enhance landscaped areas by promoting drought tolerant species that grow well in Foster City, pursuant to the Outdoor Water Conservation Ordinance and other landscaped related guidelines.

- **Program C-b: Property Owner Water Saving Techniques.** Encourage all property owners to implement the following conservation techniques: utilize drought tolerant plant materials, limit turf areas to 25% of landscaping, limit hours of the day for watering, retrofit with water-conserving fixtures, retrofit existing bathrooms and install new bathrooms with ultra low-flow toilets and water-conserving shower heads.

- **Program C-d: Water Conservation Plan.** Update the City's Water Conservation Plan. This plan describes water system deficiencies, and water supply and demand within the District service area.

- **Program C-l: TSM Ordinance Enforcement.** Enforce the City's Transportation Systems Management (TSM) Ordinance for existing and proposed businesses with more than 25

employees to promote use of SamTrans, vanpools, carpools and flextime working hours for employees.

- **Program C-m: Reduction in Automobile Trips.** Encourage Foster City residents and employees to consolidate and/or eliminate motor vehicle trips as often as possible.

Climate Action Plan. In February 2016, the City adopted a Climate Action Plan (CAP) that aims to satisfy the AB 32 GHG emission reduction goals. The CAP established the following GHG reduction targets: achieving 15-percent GHG emissions reduction below the baseline year (2005) levels by 2020, 20 percent below 2005 levels by 2025, and 80 percent below 2005 levels by 2050.

The CAP consists of goals, policies, and measures that would reduce GHG emissions from a wide range of sources and promote and increase sustainability within Foster City. The GHG reduction measures in the CAP include:

- **Energy (Community):** Energy efficiency upgrades to residential and commercial buildings through code adoption, funding programs, and urban forestation programs.

- **Energy (Municipal):** Energy efficiency upgrades and improvements by the City through revised building standards, solar systems, purchase of environmentally friendly materials, and leveraging of funds.

- **Transportation and Land Use (Community):** Policies in the General Plan that reduce automobile trips through compact and more efficient land use patterns that promote a balanced mix of land uses, encourage alternative modes of transportation, and encourage use of hybrid and electric cars.

- **Transportation-Related Municipal Operations:** Policies that promote energy efficiency in the City fleet and promote telecommuting and flexible work schedules to reduce vehicle trips.

- **Waste (Community):** Waste diversion from landfills to reduce the generation of methane and other GHGs.

- **Energy and Water:** Energy reduction in the heating and usage of water.

- **Education:** Programs to increase awareness of conservation, sustainability, and the Climate Action Plan.

Building Code. The City has adopted the following codes related to GHG emissions and energy use of buildings for future projects:

- 2019 California Building Code
- 2019 CALGreen Code
- 2019 California Energy Code

The City's Municipal Code is current through Ordinance 631, which was enacted on December 16, 2019.

Standard Conditions of Approval. The following Condition of Approval would apply to the proposed project:

- **COA 6.7:** The applicant shall provide a letter describing the sustainable practices that are included in the project and referencing the sheets in the building permit drawings that demonstrate the inclusion of the sustainable practices for review and approval by the Community Development Director.

4.5.2 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to GHG emissions that could result from implementation of the proposed project.

A single project typically does not generate a sufficient quantity of GHG emissions to affect global climate change; therefore, the global climate change impacts of the proposed project are discussed in the context of cumulative impacts, following the approach recommended by the BAAQMD. This section begins by establishing the thresholds to determine whether an impact is significant and then analyzes GHG emissions both quantitatively and qualitatively. The latter part of this section evaluates the GHG emissions expected to result from the project and the recommended feasible mitigation measures, if required.

4.5.2.1 Significance Criteria

Per Appendix G of the *State CEQA Guidelines*, the proposed project would have a significant impact related to GHG emissions if it 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.

Project-Specific Thresholds. Section 15064.4 of the *State CEQA Guidelines* states "A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project." In performing that analysis, the lead agency has discretion to determine whether to use a model or methodology to quantify GHG emissions, or to rely on a qualitative analysis or performance-based standards. This EIR relies on both quantitative thresholds, which are scaled from the State and BAAQMD numeric operational thresholds, and a qualitative analysis of compliance with applicable regulatory standards. In making a determination as to the significance of potential impacts, the lead agency then considers the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting, whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project, and the extent to which the

project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Construction Threshold. The BAAQMD has not adopted thresholds for construction emissions but recommends quantification and disclosure of these emissions. Local agencies are encouraged to adopt feasible mitigation measures to reduce construction emissions. This EIR quantifies and analyzes whether the project's construction GHG emissions would be cumulatively significant and, if so, whether the project itself would then result in significant adverse impacts on global climate change. Pursuant to BAAQMD guidance, feasible mitigation measures are identified to reduce construction-period emissions.

Operational Threshold. According to the BAAQMD CEQA Guidelines and consistency with *State CEQA Guidelines* Section 15183.5, if a project is consistent with an adopted qualified Greenhouse Gas Reduction Strategy that meets the standards, it can be presumed that the project will not have significant GHG emission impacts.

The City's CAP meets the requirements for a Qualified CAP and is designed to streamline environmental review of future development projects in the city. The CAP established the following GHG reduction targets: achieving 15-percent GHG emissions reduction below the baseline year (2005) levels by 2020, 20 percent below 2005 levels by 2025, and 80 percent below 2005 levels by 2050. However, the proposed project would not be operational until 2023; therefore, because the City's CAP was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2019 California Green Building Code) and the 2030 GHG targets established in SB 32, the City's CAP would not apply for streamlining. However, the CAP sets forth measures to achieve emission reductions; therefore, a qualitative analysis of the proposed project's consistency with these measures is provided.

The BAAQMD's most recent quantitative threshold is 1,100 metric tons of CO_2e (MT CO_2e) per year or 4.6 MT CO_2e per year per service population. These numeric operational thresholds set by the BAAQMD were calculated to achieve the State's 2020 target for GHG emissions levels (and not the SB 32 specified target of 40 percent below the 1990 GHG emissions level). The BAAQMD has not yet updated the operational thresholds to achieve target GHG emissions levels for 2030. Because the proposed project would begin operations in the post-2020 timeframe, the BAAQMD 2020 efficiency target of 1,100 MT CO_2e per year threshold and 4.6 MT CO_2e per year per service population, which have been the thresholds most recently applied to development projects, would not directly apply, as using them would not achieve the State's post-2020 GHG reduction goals.

CARB has completed a Scoping Plan, which the BAAQMD will use to establish the 2030 GHG efficiency threshold. However, BAAQMD has yet to publish a quantified GHG efficiency threshold for the 2030 target. Therefore, pursuant to CEQA Guidelines Section 15064.4(a), the City has the discretion to, in the context of a particular project, both quantify a project-specific threshold and conduct a qualitative analysis. Therefore, a scaled threshold consistent with State goals detailed in SB 32, Executive Order B-30-15, and Executive Order S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050,

respectively, was developed for evaluation of the proposed project for 2023, when the proposed project is anticipated to be operational.

Based on the calculations, discussed in more detail below, to quantitatively determine significance, this EIR uses thresholds of 968 MT CO_2e per year or 4.1 MT CO_2e per capita service population (employees plus residents) per year, which were calculated for the buildout year of 2023 based on the GHG reduction goals of SB 32 and Executive Order B-30-15. These thresholds are scaled from the BAAQMD 2020 target threshold to fit the Statewide 2030 target (40 percent below 1990 levels of emissions).

The scaled thresholds were calculated as follows:

- The 2020 threshold was based on the 2020 target (1990 levels of emissions by 2020). Based on the current 2030 target (40 percent below 1990 levels by 2030), 40 percent below the 2020 threshold (1990 level) of 1,100 MT CO_2e per year or 4.6 MT CO_2e per year per service population (employees plus residents) would represent the 2030 threshold (660 MT CO_2e per year or 2.76 MT CO_2e per year per service population).

- The threshold between 2020 and 2030 is scaled at 4 percent per year (40 percent across the 10-year period).

- With an anticipated project operation date of 2023, the proposed project's target would be 968 MT CO_2e or 3.9 MT CO_2e per year per service population. This threshold is 12 percent below the 2020 target at 4 percent per year reduction from the 2020 target for the 3-year period between 2020 and 2023.

4.5.2.2 Project Impacts

The following section describes potential impacts associated with GHG emissions that could occur with development of the proposed project.

1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment

This section discusses the proposed project's impacts related to the release of GHG emissions for both the construction and operation periods.

Construction Impacts. GHG emissions associated with the proposed project would occur over the short term from demolition and construction activities, which would produce combustion emissions from various sources, but primarily of emissions from equipment exhaust. During demolition and construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As identified in Section 4.5.2.1, the BAAQMD has not adopted thresholds for construction emissions but recommends quantification and disclosure of these emissions. The California Emissions Estimator Model version 2020.4.0 (CalEEMod) was used to estimate demolition and construction-related emissions associated with the proposed project. As stated in Project Description, the proposed project would include demolition of the existing building and surface parking lot on the project site, resulting in approximately 180 tons of demolition waste, which was included in CalEEMod. Construction of the proposed project is anticipated to begin in March 2022 and last 17 months. The proposed project is anticipated to be fully operational and occupied by late 2023. Other construction details are not yet known; therefore, default assumptions (e.g., construction equipment and worker and truck trips) from CalEEMod were used. This analysis assumes the use of Tier 2 construction equipment, which is proposed by the project. CalEEMod output sheets are included in Appendix D.

Using CalEEMod, it is estimated that construction of the proposed project would generate a total of 509.7 MT CO_2e. Although the BAAQMD does not have adopted thresholds for construction emissions, without implementation of all feasible reduction measures, construction period impacts would be potentially significant.

The BAAQMD recommends adoption of Basic Construction Mitigation Measures to mitigate GHG construction emissions. Implementation of COA 9.5, as identified in Section 4.4, Air Quality, would reduce GHG emissions by reducing the amount of construction vehicle idling and by requiring the use of properly maintained equipment. Therefore, project construction impacts associated with GHG emissions would be less than significant.

Operational Impacts. Long-term operation of the proposed project would generate GHG emissions from area, mobile, stationary, waste, and water sources as well as indirect emissions from sources associated with energy consumption. Mobile-source GHG emissions would include project-generated vehicle trips associated with trips to the proposed project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site and other sources. Stationary source emissions would include operation of the emergency generator. Waste source emissions generated by the proposed project include energy generated by landfilling and other methods of disposal related to transporting and managing project-generated waste. In addition, water-source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

Long-term operational emissions associated with the proposed project were calculated using CalEEMod. Trip generation rates used in CalEEMod for the project were based on the project's trip generation estimates, which assume the proposed project would typically generate 699 average daily trips (refer to Table 4.3.B in Section 4.3, Transportation, for trip generation estimates). In addition, the proposed project would comply with current CALGreen standards, which was included in the CalEEMod modeling assumptions. The proposed project would also include an emergency generator within the ground level of the parking garage, which was

included in CalEEMod.[22] When project-specific data were not available, default assumptions from CalEEMod were used to estimate project emissions. Model results are shown in Table 4.5.D. CalEEMod output sheets are included in Appendix D.

Table 4.5.D: Proposed Project GHG Emissions (Metric Tons Per Year)

Emissions Source	Operational Emissions				
	CO_2	CH_4	N_2O	CO_2e	Percentage of Total
Area Source Emissions	<0.1	<0.1	0.0	<0.1	<1
Energy Source Emissions	212.1	<0.1	<0.1	213.7	29
Mobile Source Emissions	438.0	<0.1	<0.1	445.1	60
Stationary Source Emissions	6.6	<0.1	0.0	6.7	1
Waste Source Emissions	1.5	0.1	0.0	3.7	<1
Water Source Emissions	30.9	1.2	<0.1	70.4	10
Total Annual Emissions				**739.5**	**100**
Significance Threshold[1]				**968.0**	
Exceed Threshold?				**No**	
Total Annual Service Population Emissions (Metric Tons/Year/Service Population)				**3.47**	-
Service Population Threshold[1]				**4.1**	-
Exceed Threshold?				**No**	-

Source: Compiled by LSA (August 2021).

[1] This threshold is based on the BAAQMD thresholds using a statewide 2020 target (achieve 1990 levels by 2020) regressed to fit the statewide 2030 target (40 percent below 1990 levels of emissions) for the project's opening year of 2023.

BAAQMD = Bay Area Air Quality Management District
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

As shown in Table 4.5.D, mobile source emissions are the largest source of emissions, at approximately 60 percent of total CO_2e emissions, followed by energy source emissions at approximately 29 percent of the total. In addition, water source emissions are approximately 10 percent and stationary source emissions are approximately 1 percent of the total emissions. Area and waste source emissions each account for less than 1 percent of the total emissions.

As discussed above and based on the project-specific thresholds developed for this analysis, GHG emissions generated by the proposed project would be less than significant if one or more of the following criteria are met: (1) the proposed project results in operational-related GHG emissions of less than 968 MT CO_2e per year, or (2) the proposed project would result in operational-related GHG emissions of less than 4.1 MT CO_2e per year per service population (residents plus employees). As shown in Table 4.5.D, the proposed project would generate 739.5 metric tons of CO_2e per year, which would be below the numeric threshold of 968 metric tons CO_2e. Therefore, this impact would be less than significant. Because the project would meet the first criterion, evaluation of the second criterion related to service population is not required, although the analysis is provided below for informational purposes.

[22] A 250-kilowatt (335 horsepower) back-up generator would be installed for emergency use only and would run 1 hour per week for testing.

As discussed in Chapter 3, Project Description, it is anticipated that the project site would accommodate approximately 213 employees. The proposed project would not include housing; therefore the total service population (residents plus employees) would be 213 people. Therefore, the project's GHG emissions would result in a GHG efficiency of 3.47 MT CO_2e per service population, which would be well below the 4.1 MT CO_2e per service population threshold. Therefore, this impact would be less than significant.

2) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs

Applicable plans adopted for the purpose of reducing GHG emissions include the Scoping Plan, Plan Bay Area, and the City's CAP. As such, the proposed project was evaluated for consistency with those plans to demonstrate whether the proposed project would conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the GHG emissions.

Scoping Plan. The following discussion evaluates the proposed project according to the goals of AB 32, the AB 32 Scoping Plan, Executive Order B-30-15, SB 32, and AB 197.

AB 32 is aimed at reducing GHG emissions to 1990 levels by 2020. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The AB 32 Scoping Plan has a range of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

Executive Order B-30-15 added the immediate target of reducing GHG emissions to 40 percent below 1990 levels by 2030. The CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32.[23] SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Executive Order B-30-15. SB 32 builds on AB 32 and keeps the State on the path toward achieving the 2050 objective of reducing emissions to 80 percent below 1990 levels. The companion bill to SB 32, AB 197, provides additional direction to the CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 intended to provide easier public access to air emissions data that are collected by the CARB was posted in December 2016.

As identified above, the AB 32 Scoping Plan contains GHG reduction measures that work towards reducing GHG emissions, consistent with the targets set by AB 32, Executive Order B-30-15, and codified by SB 32 and AB 197. The measures applicable to the proposed project include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as qualitatively discussed below.

Energy Measures. Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new

[23] CARB. 2017, op. cit.

technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As identified in the Project Description, the proposed project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver equivalence, would comply with current CALGreen standards, would include exterior shading to respond to solar exposure, and would have low-flow indoor water fixtures, advanced water and energy metering, infrastructure for electric vehicle charging, and enhanced indoor air quality strategies including advanced ventilation. Therefore, the proposed project would comply with applicable energy measures.

Water Conservation and Efficiency Measures. Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would achieve LEED Silver equivalence, use low-flow indoor water fixtures, advanced water and energy metering, and would comply with current CALGreen standards. LEED and CALGreen standards include a variety of different measures, including reduction of wastewater and water use. Therefore, the proposed project would comply with applicable water conservation and efficiency measures.

Transportation and Motor Vehicle Measures. The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would comply with applicable transportation and motor vehicle measures.

The proposed project would develop life science office uses that would locate employees near existing office, commercial, hotel, light industrial, residential, park, and institutional uses, reducing the demand for travel by single occupancy vehicles. The proposed project would also develop a Transportation Demand Management plan to provide trip reduction measures and reduce vehicle traffic in and around the project site (refer to Section 4.3, Transportation). In addition, public transit facilities serve the project area and the proposed project would provide bicycle and pedestrian facilities, which would also help to reduce the demand for travel by single-occupancy vehicles.

Table 4.5.E summarizes the proposed project's consistency with the 2017 Scoping Plan's mitigation measures identified in Appendix B of the 2017 Scoping Plan.

Plan Bay Area. As described above, Plan Bay Area 2050 is a State-mandated, integrated long-range transportation and land use plan. Plan Bay Area 2050 includes 35 strategies to improve housing, the economy, transportation, and the environment. These strategies enable the plan to be evaluated by its performance in areas identified as key regional concerns, including equitable access, economic vitality, and transportation system

effectiveness. Table 4.5.F includes an evaluation of the proposed project's consistency with the strategies in Plan Bay Area 2050.

Table 4.5.E: Project Consistency with 2017 Scoping Plan Appendix B Measures

2017 Scoping Plan Appendix B Measures	Project Consistency
Comply with lead agency's standards for mitigating transportation impacts under SB 743.	***Consistent.*** The proposed project will be evaluated by the City of Foster City for compliance with SB 743 requirements through an analysis of VMT and implementation of recommended mitigation measures. Refer to Section 4.3, Transportation, for additional discussion.
Require on-site EV charging capabilities for parking spaces serving the project to meet jurisdiction-wide EV proliferation goals.	***Consistent.*** The proposed project would provide infrastructure for EV parking and charging.
Allow for new construction to install fewer on-site parking spaces than required by local municipal building code, if appropriate.	***Consistent.*** The proposed project would not install fewer on-site parking spaces; however, the proposed project would develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project site. The TDM measures would encourage employees to use other transportation options and rely less on driving alone, consistent with the intent of this measure.
Dedicate on-site parking for shared vehicles.	***Consistent.*** The proposed project would develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project site. As such, the TDM measures would encourage employees to use other transportation options and rely less on driving alone, consistent with the intent of this measure.
Provide adequate, safe, convenient, and secure on-site bicycle parking and storage in multifamily residential projects and in non-residential projects.	***Consistent.*** The proposed project would provide bicycle parking on site.
Provide on- and off-site safety improvements for bike, pedestrian, and transit connections, and/or implement relevant improvements identified in an applicable bicycle and/or pedestrian master plan.	***Consistent.*** The proposed project would develop life science office uses that would locate employees near existing office, commercial, hotel, light industrial, residential, park, and institutional uses. The proposed project would include EV parking and would provide new sidewalks and bicycle parking on site. In addition, the project area is served by public transit facilities. As such, the proposed project would help to reduce the demand for travel by single-occupancy vehicles, consistent with the intent of this measure.
Require on-site renewable energy generation.	***Not Applicable.*** The proposed project would not provide renewable energy generation; however, the proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, and advanced water and energy metering. All energy provide to the site would be consistent with the State's Renewable Energy Portfolio standards.
Prohibit wood-burning fireplaces in new development, and require replacement of wood-burning fireplaces for renovations over a certain size developments.	***Consistent.*** The proposed project would not include wood-burning fireplaces.
Require cool roofs and "cool parking" that promotes cool surface treatment for new parking facilities as well as existing surface lots undergoing resurfacing.	***Consistent.*** The proposed project would demolish the existing surface parking lot and would provide approximately half of the parking within an enclosed parking structure, reducing the need for cool parking facilities.

Table 4.5.E: Project Consistency with 2017 Scoping Plan Appendix B Measures

2017 Scoping Plan Appendix B Measures	Project Consistency
Require solar-ready roofs.	***Not Applicable.*** The proposed project would not include solar-ready roofs, which more appropriately fit the design of single-family residences. However, the proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, and advanced water and energy metering.
Require organic collection in new developments.	***Consistent.*** Foster City is served by Recology San Mateo County for solid waste, recycling, and composting services. As such, the proposed project would provide composting services.
Require low-water landscaping in new developments. Require water efficient landscape maintenance to conserve water and reduce landscape waste.	***Consistent.*** The proposed project would incorporate low-flow indoor water fixtures, advanced water and energy metering, and on-site stormwater would be collected, treated per C.3 treatment methods, and conveyed to the City's storm drain main within Vintage Park Drive.
Achieve Zero Net Energy performance building standards prior to dates required by the Energy Code.	***Not Consistent.*** Although the project is not anticipated to achieve net zero energy, the proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for EV charging, and enhanced indoor air quality strategies including advanced ventilation.
Encourage new construction, including municipal building construction, to achieve third-party green building certifications, such as the GreenPoint Rated program or the LEED rating system.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for EV charging, and enhanced indoor air quality strategies including advanced ventilation.
Require the design of bike lanes to connect to the regional bicycle network.	***Consistent.*** The proposed project would not include bike lanes; however, the project would encourage pedestrian and bicycle access. In addition, the project would provide bicycle parking on-site.
Expand urban forestry and green infrastructure in new land development.	***Consistent.*** A total of approximately 28,000 square feet of open space would be provided across the entire project site. Open space would consist of approximately 22,000 square feet of ground-level common open space and an approximately 6,000-square-foot rooftop terrace on the fourth level that would include landscaping. Of the existing 55 trees on the project site, 53 would be removed. Approximately 53 new trees would be planted throughout the project site. Additionally, another 61 off-site trees would remain around the project site, including within the Estero Municipal Improvement District strip, in the Vintage Park Community Association park, and along the Vintage Park Drive frontage. In addition, landscaping would be provided through the project site, including adjacent to Vintage Park Drive.
Require preferential parking spaces for park and ride to incentivize carpooling, vanpooling, commuter bus, electric vehicles, and rail service use.	***Consistent.*** The proposed project would develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project site. As such, the TDM measures would encourage employees to use other transportation options and rely less on driving alone, consistent with the intent of this measure.

Table 4.5.E: Project Consistency with 2017 Scoping Plan Appendix B Measures

2017 Scoping Plan Appendix B Measures	Project Consistency
Require a transportation management plan for specific plans which establishes a numeric target for non-SOV travel and overall VMT.	***Consistent.*** The proposed project would develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project site. As such, the TDM measures would encourage employees to use other transportation options and rely less on driving alone, consistent with the intent of this measure.
Develop a rideshare program targeting commuters to major employment centers.	***Consistent.*** The proposed project would develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project site. As such, the TDM measures would encourage employees to use other transportation options and rely less on driving alone, consistent with the intent of this measure.
Require the design of bus stops/shelters/express lanes in new developments to promote the usage of mass-transit.	***Not Applicable.*** There are no planned bus stops within the immediate vicinity of the project site.
Require gas outlets in residential backyards for use with outdoor cooking appliances such as gas barbeques if natural gas service is available.	***Not Applicable.*** The proposed project would not include residential uses.
Require the installation of electrical outlets on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.	***Not Applicable.*** The proposed project would not include residential uses.
Require the design of the electric boxes in new residential unit garages to promote electric vehicle usage.	***Not Applicable.*** The proposed project would not include residential uses.
Require electric vehicle charging station (Conductive/inductive) and signage for non-residential developments.	***Consistent.*** The proposed project would provide infrastructure for EV parking and charging.
Provide electric outlets to promote the use of electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands.	***Not Applicable.*** The proposed project would not include parks or public/quasi-public lands.
Require each residential unit to be “solar ready,” including installing the appropriate hardware and proper structural engineering.	***Not Applicable.*** The proposed project would not include residential uses.
Require the installation of energy conserving appliances such as on-demand tankless water heaters and whole-house fans.	***Not Applicable.*** The proposed project would not include residential uses.
Require each residential and commercial building to be equipped with energy efficient AC units and heating systems with programmable thermostats/timers.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure and enhanced indoor air quality strategies including advanced ventilation.
Require large-scale residential developments and commercial buildings to report energy use, and set specific targets for per-capita energy use.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, and advanced water and energy metering.
Require each residential and commercial building to utilize low flow water fixtures such as low-flow toilets and faucets.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include low-flow indoor water fixtures and advanced water and energy metering.
Require the use of energy-efficient lighting for all street, parking, and area lighting.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include energy-efficient lighting throughout.

Table 4.5.E: Project Consistency with 2017 Scoping Plan Appendix B Measures

2017 Scoping Plan Appendix B Measures	Project Consistency
Require the landscaping design for parking lots to utilize tree cover and compost/mulch.	***Not Applicable.*** A total of approximately 28,000 square feet of open space would be provided across the entire project site.
Incorporate water retention in the design of parking lots and landscaping, including using compost/mulch.	***Not Applicable.*** The on-site stormwater would be collected, treated per C.3 treatment methods, and conveyed to the City's storm drain main within Vintage Park Drive.
Require the development project to propose an off-site mitigation project which should generate carbon credits equivalent to the anticipated GHG emission reductions. This would be implemented via an approved protocol for carbon credits from California Air Pollution Control Officers Association (CAPCOA), the California Air Resources Board, or other similar entities determined acceptable by the local air district.	***Not Applicable.*** The proposed project would not propose an off-site mitigation project as mitigation is not required.
Require the project to purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, American Carbon Registry (ACR), Climate Action Reserve (CAR) or other similar carbon credit registry determined to be acceptable by the local air district.	***Not Applicable.*** The proposed project would not purchase carbon credits from the CAPCOA GHG Reduction Exchange Program, ACR, CAR or other similar carbon credit registry as mitigation is not required.
Encourage the applicant to consider generating or purchasing local and California-only carbon credits as the preferred mechanism to implement its off-site mitigation measure for GHG emissions and that will facilitate the State's efforts in achieving the GHG emission reduction goal.	***Not Applicable.*** The proposed project would not generate or purchase local or California-only carbon to achieve net zero GHG emissions, as mitigation is not required.

Source: Compiled by LSA (August 2021).
AC = air conditioning
CALGreen = California Green Building Standards Code
City = City of Foster City
EV = electric vehicle
GHG = greenhouse gas
LEED = Leadership in Energy and Environmental Design
SB = Senate Bill
SOV = single-occupancy vehicle
TDM = Transportation Demand Management
USEPA = United States Environmental Protection Agency
VMT = vehicle miles traveled

Table 4.5.F: Project Consistency with Plan Bay Area 2050

Goal	Strategy	Project Consistency
Protect and Preserve Affordable Housing	H1. Further strengthen renter protections beyond state law.	***Not Applicable.*** The proposed project would not include residential uses.
	H2. Preserve existing affordable housing.	***Not Applicable.*** The project site does not include any existing residential uses.
Spur Housing Production for Residents of All Income Levels	H3. Allow a greater mix of housing densities and types in Growth Geographies.	***Not Applicable.*** The proposed project would not include residential uses.
	H4. Build adequate affordable housing to ensure homes for all.	***Not Applicable.*** The proposed project would not include residential uses.
	H5. Integrate affordable housing into all major housing projects.	***Not Applicable.*** The proposed project would not include residential uses.
	H6. Transform aging malls and office parks into neighborhoods.	***Not Applicable.*** The proposed project would not include residential uses.
Create Inclusive Communities	H7. Provide targeted mortgage, rental and small business assistance to Equity Priority Communities.	***Not Applicable.*** The proposed project would not include residential uses.
	H8. Accelerate reuse of public and community-owned land for mixed-income housing and essential services.	***Not Applicable.*** The project site does not contain any public or community-owned land.
Improve Economic Mobility	EC1. Implement a statewide universal basic income.	***Not Applicable.*** The proposed project is a private development and would not include the use of any public funding.
	EC2. Expand job training and incubator programs.	***Consistent.*** The proposed project would include life science office uses, thereby increasing the number of available jobs within the region.
	EC3. Invest in high-speed internet in underserved low-income communities.	***Not Applicable.*** The proposed project would not include residential uses and would not require the construction of new public infrastructure.
Shift the Location of Jobs	EC4. Allow greater commercial densities in Growth Geographies.	***Not Applicable.*** The project site is not located within a Growth Geography.
	EC5. Provide incentives to employers to shift jobs to housing-rich areas well served by transit.	***Consistent.*** The proposed project would include life science office uses in an infill area well-served by transit, thereby increasing the number of available jobs within the vicinity and in proximity to residential areas.
	EC6. Retain and invest in key industrial lands.	***Not Applicable.*** The project site is not located within a Priority Production Area.

Table 4.5.F: Project Consistency with Plan Bay Area 2050

Goal	Strategy	Project Consistency
Create Healthy and Safe Streets	T8. Build a Complete Streets network.	***Consistent.*** Pedestrian access to the proposed building would be provided by both Vintage Park Drive and Chess Drive, including new sidewalks connecting to Chess Drive and a landscaped area between the Vintage Park Drive right-of-way and the proposed building. Vehicular access to the project site would be provided by the existing driveways along Vintage Park Drive and Chess Drive.
	T9. Advance regional Vision Zero policy through street design and reduced speeds.	***Consistent.*** The proposed project would provide adequate sight distance at the proposed driveway and, as required by Mitigation Measure TRA-1, would implement changes to the existing roadway geometry to reduce conflicting automobile movements that could be hazardous.
Reduce Risks From Hazards	EN1. Adapt to sea level rise.	***Consistent.*** The project site is not located in an area susceptible to impacts related to sea level rise.
	EN2. Provide means-based financial support to retrofit existing residential buildings.	***Not Applicable.*** The project site does not include any existing residential uses.
	EN3. Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings.	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, and advanced water and energy metering. All energy provide to the site would be consistent with the State's Renewable Energy Portfolio standards.
Expand Access to Parks and Open Space	EN4. Maintain urban growth boundaries.	***Consistent.*** The project site is located within the City of Foster City on a previously developed site.
	EN5. Protect and manage high-value conservation lands.	***Not Applicable.*** The project site is located on a previously developed site and is not located within a conservation area.
	EN6. Modernize and expand parks, trails and recreation facilities.	***Not Applicable.*** The proposed project would not include any modifications to any parks, trails, or recreation facilities.
Reduce Climate Emissions	EN7. Expand commute trip reduction programs at major employers.	***Consistent.*** The proposed project would include the implementation of a TDM plan to provide trip-reduction measures and reduce vehicle traffic in and around the project.
	EN8. Expand clean vehicle initiatives.	***Consistent.*** The proposed project would provide infrastructure for EV parking and charging.
	EN9. Expand transportation demand management initiatives.	***Consistent.*** The proposed project would include the implementation of a TDM plan to provide trip-reduction measures and reduce vehicle traffic in and around the project.

Sources: Metropolitan Transportation Commission and Association of Bay Area Governments (2021); LSA (December 2021).
Note: Strategies related to Maintaining and Optimizing the Existing System and Building a Next-Generation Transit Network (strategies T1 through T7 and T10 through T12) are not evaluated here as they require regional investment as opposed to specific action by individual projects.
EV = electric vehicle
LEED = Leadership in Energy and Environmental Design
TDM = Transportation Demand Management

Foster City Climate Action Plan. As discussed above, the City adopted its CAP in February 2016 and aims to satisfy the AB 32 GHG emission reduction goals. The CAP is consistent with *State CEQA Guidelines* Section 15183.5; therefore, the CAP serves a tiering document for analyzing

GHG emissions of future development. The CAP established the following GHG reduction targets: achieving 15-percent GHG emissions reduction below the baseline year (2005) levels by 2020, 20 percent below 2005 levels by 2025, and 80 percent below 2005 levels by 2050. However, the proposed project would not be operational until 2023; therefore, because the City's CAP was prepared based on the State's 2020 GHG targets, which are now superseded by State policies (i.e., the 2019 California Green Building Code) and the 2030 GHG targets established in SB 32, the City's CAP would not apply for streamlining. However, the CAP sets forth measures to achieve emission reductions; therefore, a qualitative analysis of the proposed project's consistency with the CAP measures is provided in Table 4.5.G.

Conclusion. As described above, the proposed project would generally be consistent with the City of Foster City CAP, Plan Bay Area, and the California Climate Change Scoping Plan. Therefore, the proposed project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the GHG emissions. This impact would be less than significant.

4.5.2.3 Cumulative Impacts

GHG impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in GHG emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. This serves to define the State's share of the reductions regardless of the activities or lack of activities of other areas of the United States or the world. Therefore, a cumulative threshold based on consistency with State targets and actions to reduce GHGs is an appropriate standard of comparison for significance determinations.

AB 32 requires the CARB to reduce Statewide GHG emissions to 1990 level by 2020. As part of this legislation, the CARB was required to prepare a "Scoping Plan" that demonstrates how the State will achieve this goal. The Scoping Plan was first adopted in 2011 and in it, local governments were described as "essential partners" in meeting the statewide goal, recommending a GHG reduction level of 15 percent below 2005 to 2008 levels by 2020. In addition, the CARB released a second update to the Scoping Plan, the 2017 Scoping Plan, to reflect the 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030.

As discussed above, the proposed project is anticipated to be fully operational and occupied by late 2023. As such, the proposed project would be required to help the City do its part in reducing GHG emissions beyond 2020. As identified above, the proposed project incorporates design features consistent with the applicable measures as included in the City's CAP, Plan Bay Area 2050, and the Scoping Plan. In addition, the proposed project would not generate GHG emissions that would exceed the scaled BAAQMD significance thresholds. As such, cumulative impacts would be considered less than significant.

Table 4.5.G: Project Consistency with CAP Strategies

Measures	Project Consistency
EC1: Implement a Residential Green Building Ordinance	***Not Applicable.*** The proposed project would not include residential uses.
EC2: Encourage Personal Energy Audits and Energy Efficient Home Upgrades	***Not Applicable.*** The proposed project would not include residential uses.
EC3: Encourage ad Facilitate Residential Energy Efficiency Upgrades	***Not Applicable.*** The proposed project would not include residential uses.
EC4: Adopt a Commercial Green Building Ordinance	***Consistent.*** The City of Foster City has not adopted a Commercial Green Building Ordinance. However, the City of Foster City has adopted the statewide California Green Building Standard for new constructions. As such, the proposed project is subject to the 2019 California Green Building Standards and would be consistent with this measure.
EC5: Encourage and Facilitate Business Energy Efficiency Upgrades	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for EV charging, and enhanced indoor air quality strategies including advanced ventilation.
EC6: Provide Financing for Commercial Energy Efficiency and Renewable Energy	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
EC7: Encourage Solar Panel Installation	***Not Applicable.*** The proposed project would not provide solar; however, the proposed project would be designed to achieve LEED Silver equivalence and would include exterior shading to respond to solar exposure, low-flow indoor water fixtures, advanced water and energy metering, infrastructure for EV charging, and enhanced indoor air quality strategies, including advanced ventilation.
EC8: Create a Requirement for Urban Forestation	***Consistent.*** A total of approximately 28,000 square feet of open space would be provided across the entire project site. Open space would consist of approximately 22,000 square feet of ground level common open space and an approximately 6,000-square-foot rooftop terrace on the fourth level that would include landscaping. Of the existing 55 trees on the project site, 53 would be removed. Approximately 53 new trees would be planted throughout the project site. Additionally, another 61 off-site trees would remain around the project site, including within the EMID strip, in the VPCA park, and along the Vintage Park Drive frontage. In addition, landscaping would be provided through the project site, including adjacent to Vintage Park Drive.
EC9: Work with Developers and Employers to Develop Robust Sustainability Plans to Minimize GHG Emissions	***Not Applicable.*** This is a community policy based goal; therefore, this measure would not be applicable to the project.
TL1: Implement Smart Growth Development	***Consistent.*** The proposed project would result in the demolition of an existing building and surface parking lot and the redevelopment of the project site with life science office uses.

Table 4.5.G: Project Consistency with CAP Strategies

Measures	Project Consistency
TL2: Implement Complete Streets and Pedestrian and Bicycle-Friendly Design	***Consistent.*** The proposed project would develop life science office uses that would locate employees near existing office, commercial, hotel, light industrial, residential, park, and institutional uses, reducing the demand for travel by single-occupancy vehicles. The proposed project would also develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project. In addition, the project area is served by public transit facilities and the proposed project would provide bicycle and pedestrian facilities, which would also help to reduce the demand for travel by single-occupancy vehicles, consistent with the intent of this measure.
TL3: Incentivize and Explore Car and Bike Sharing	***Consistent.*** The proposed project would develop life science office uses that would locate employees near existing office, commercial, hotel, light industrial, residential, park, and institutional uses, reducing the demand for travel by single-occupancy vehicles. The proposed project would also develop a TDM plan to provide trip reduction measures and reduce vehicle traffic in and around the project. In addition, the project area is served by public transit facilities and the proposed project would provide bicycle and pedestrian facilities, which would also help to reduce the demand for travel by single occupancy vehicles, consistent with the intent of this measure.
TL4: Encourage a Preferred Parking/Electric Plug-in Policy for Alternative Fuel Vehicles	***Consistent.*** The proposed project would provide infrastructure for EV parking and charging.
T5: Support Safe Routes to School	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
WC1: Achieve a Higher Waste Diversion Rate of 75 Percent	***Consistent.*** The proposed project would comply with the CalRecycle initiative of reducing landfill waste by 75 percent.
WC2: Adopt an Ordinance to Prohibit Disposable Polystyrene Food Ware	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
WC3: Continue Participation in a Grading or Award Program for Commercial Good Waste Collection	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
WC4: Implement a Ban on Single Use Plastic Carryout Bags and Charge for Paper and Reusable Bags	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
WC5: Adopt a Construction and Demolition Ordinance	***Consistent.*** The proposed project would be consistent with the City's Construction and Demolition Ordinance.
WC6: Adopt a Yard Waste Ordinance	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
WC7: Facilitate Recycling of Styrofoam and Hard-to-recycle Plastics	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
EW1: Lower Residential and Commercial Water Usage in Foster City	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would install low-flow indoor water fixtures and advanced water and energy metering.
EW2: Adopt a Water-wise Landscaping Ordinance and Outdoor Water Saving incentives	***Consistent.*** The City's EMID has adopted an Outdoor Water Conservation in Landscaping Ordinance that offers incentives to reduce outdoor water usage. The proposed project is subject to the applicable outdoor water conservation in landscaping measures in the ordinance.
EW3: Adopt an Ordinance and incentives for Indoor Water Savings	***Consistent.*** The City has adopted an Indoor Water Use Efficiency Ordinance that specifies various types of water appliances for new construction and applicable remodels. The proposed project is subject to the applicable indoor water use efficiency measures in the ordinance.

Table 4.5.G: Project Consistency with CAP Strategies

Measures	Project Consistency
EW4: Establish Conservation-Based Water Rates	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
EW5: Increase Promotion for Water-saving Programs	***Consistent.*** The proposed project would be designed to achieve LEED Silver equivalence and would install low-flow indoor water fixtures and advanced water and energy metering.
EW6: Create More Informative Water Bills	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.
E7: Work with BAWSCA and EMID to Improve Water Conservation Information	***Not Applicable.*** This is a community policy-based goal; therefore, this measure would not be applicable to the project.

Sources: City of Foster City (2015); LSA (August 2021).
BAWSCA = Bay Area Water Supply and Conservation Agency
CalRecycle = California Department of Resources Recycling and Recovery
City = City of Foster City
EMID = Estero Municipal Improvement District
EV = electric vehicle
LEED = Leadership in Energy and Environmental Design
TDM = Transportation Demand Management
VPCA = Vintage Park Community Association

4.6 NOISE

This section describes existing noise and vibration conditions, sets forth criteria for determining the significance of noise and vibration impacts, and estimates the likely noise and vibration impacts that would result from construction and operation of the proposed project. Standard conditions of approval and/or mitigation measures to reduce or avoid potentially significant noise and vibration impacts are identified, where appropriate.

4.6.1 Setting

This section describes the fundamentals of noise and vibration, summarizes the regulatory framework, and describes the existing noise environment of the project site and its vicinity.

4.6.1.1 Characteristics of Sound

Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is the number of complete vibrations or cycles per second of a wave that results in the range of tone from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment, and it is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effects on adjacent sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. Table 4.6.A contains a list of typical acoustical terms and definitions. Figure 4.6-1 shows representative outdoor and indoor noise levels in units of A-weighted decibels (dBA).

A decibel (dB) is a unit of measurement which indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness.

Table 4.6.A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of sound level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of five decibels to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 decibels to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

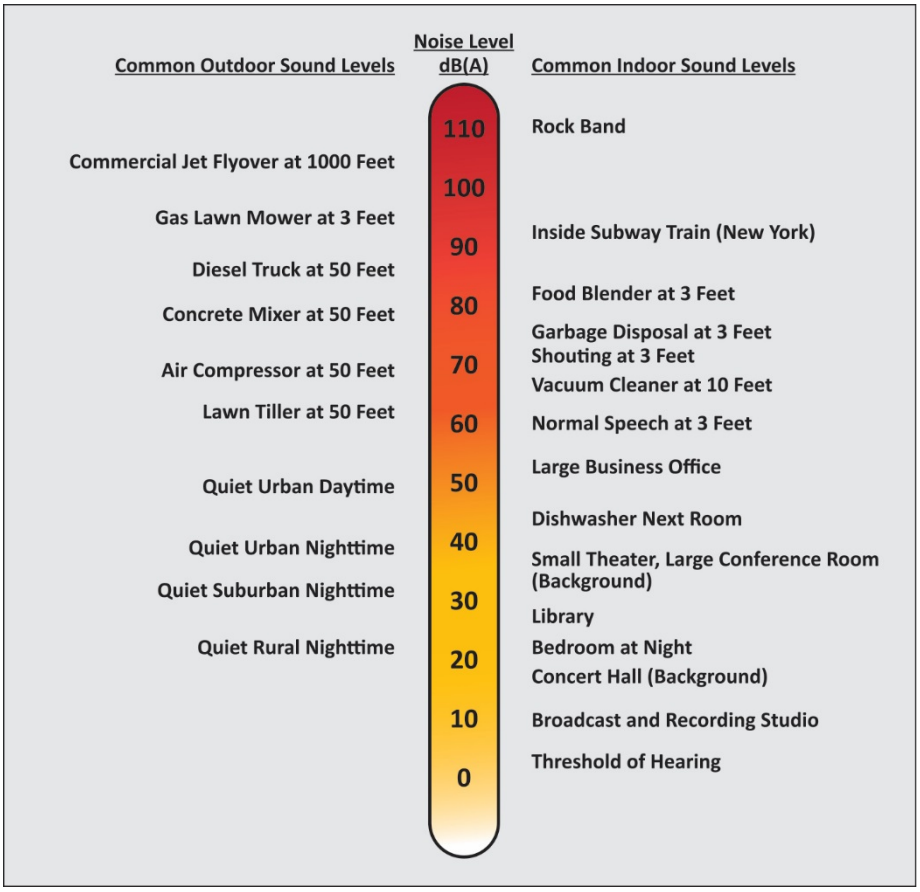
Source: *Handbook of Acoustical Measurements and Noise Control* (Cyril Harris 1998)

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on dBA. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other and are normally exchangeable. The

noise adjustments are added to the noise events occurring during the more sensitive hours. Typical A-weighted sound levels from various sources are described in Figure 4.6-1.

Figure 4.6-1: Typical A-Weighted Sound Levels



Source: Compiled by LSA (2016).

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions, and addresses the annoying aspects of intermittent noise.

Noise standards in terms of percentile exceedance levels, L_n, are often used together with the L_{max} for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the L_{10} noise level represents the level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the

time and is considered the lowest noise level experienced during a monitoring period. It is normally referred to as the background noise level. For a relatively steady noise, the measured L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dBA or greater, because, as described earlier, this level of noise change has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 and 3 dBA. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise level of less than 1 dBA that are inaudible to the human ear. A change in noise level of at least 5 dBA would be required before any noticeable change in human response would be expected and a 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response. Only audible changes in existing ambient or background noise levels are considered potentially significant.

Physiological Effects of Noise. The effects of noise on people can also be described in three categories: annoyance, interference with activities such as speech or sleep, and physiological effects such as hearing loss. Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the ear, and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling.

Unwanted community effects of noise occur at levels much lower than those that cause hearing loss and other health effects. Noise annoyance occurs when it interferes with sleeping, conversation, and noise-sensitive work, including learning or listening to the radio, television, or music. According to World Health Organization noise studies, few people are seriously annoyed by daytime activities with noise levels below 55 dBA, or are only moderately annoyed with noise levels below 50 dBA.[1]

4.6.1.2 Characteristics of Ground-borne Vibration

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may cause perceptible vibration from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called ground-borne noise. When assessing annoyance from ground-borne noise, vibration is typically expressed as root-mean-square (RMS) velocity in units of decibels of 1 microinch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB." Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. Ground-borne vibration is almost never annoying to people who are outdoors. Although the motion

[1] World Health Organization. 1999. *Guidelines for Community Noise*.

of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

In extreme cases, excessive ground-borne vibration has the potential to cause structural damage to buildings. Vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). Common sources of ground-borne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Typical vibration source levels from construction equipment are shown in Table 4.6.B.

Table 4.6.B: Typical Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 feet (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration, May 2006)
PPV = peak particle velocity
VdB = vibration velocity decibels

4.6.1.3 Existing Noise Environment

The ambient noise environment in Foster City is affected by a variety of noise sources, including vehicle traffic, aircraft, commercial, and industrial noise. The following section describes the existing noise environment and identifies the primary noise sources in the vicinity of the project site.

Existing Traffic Noise. Motor vehicles with their distinctive noise characteristics are a major source of noise in the city. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Traffic noise depends primarily on traffic speed (high-frequency tire noise increases with speed) and the proportion of truck traffic, which generates engine, exhaust, and wind noise. The proximity of freeways and major streets, and the large amount of truck traffic serving commercial uses in the area make the city susceptible to traffic noise. Traffic noise at the project site is primarily associated with vehicle traffic on Vintage Park Drive, Chess Drive, and State Route 92.

Existing Commercial Noise. Commercial activity from the Home Depot parking lot to the west is a major noise source at the project site. Truck access, vehicles parking, loading/unloading activities, and loudspeaker announcements are all associated with the parking lot to the west.

Existing Aircraft Noise. The project site is not near a private airstrip. The closest airport to the project site is San Carlos Airport, 3.7 miles south of the project site.[2] The project site is within Area A of the Airport Influence Area (AIA) Boundary of San Carlos Airport, where requirements for real estate disclosure are mandatory due to potential noise issues. In addition, San Francisco International Airport (SFO) is approximately 5.5 miles northwest of the project site.[3] The project site is within Area B of the AIA Boundary of the SFO, where land development proposals shall be reviewed by the Airport Land Use Commission. In addition, real estate disclosures are also mandatory.

As regulated by Federal Aviation Regulations Part 150, 65 dBA CNEL is considered the ambient noise level above which residential and other noise-sensitive land uses (including schools, hospitals, and places of worship) are considered incompatible. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA CNEL noise contours of either of these airports.

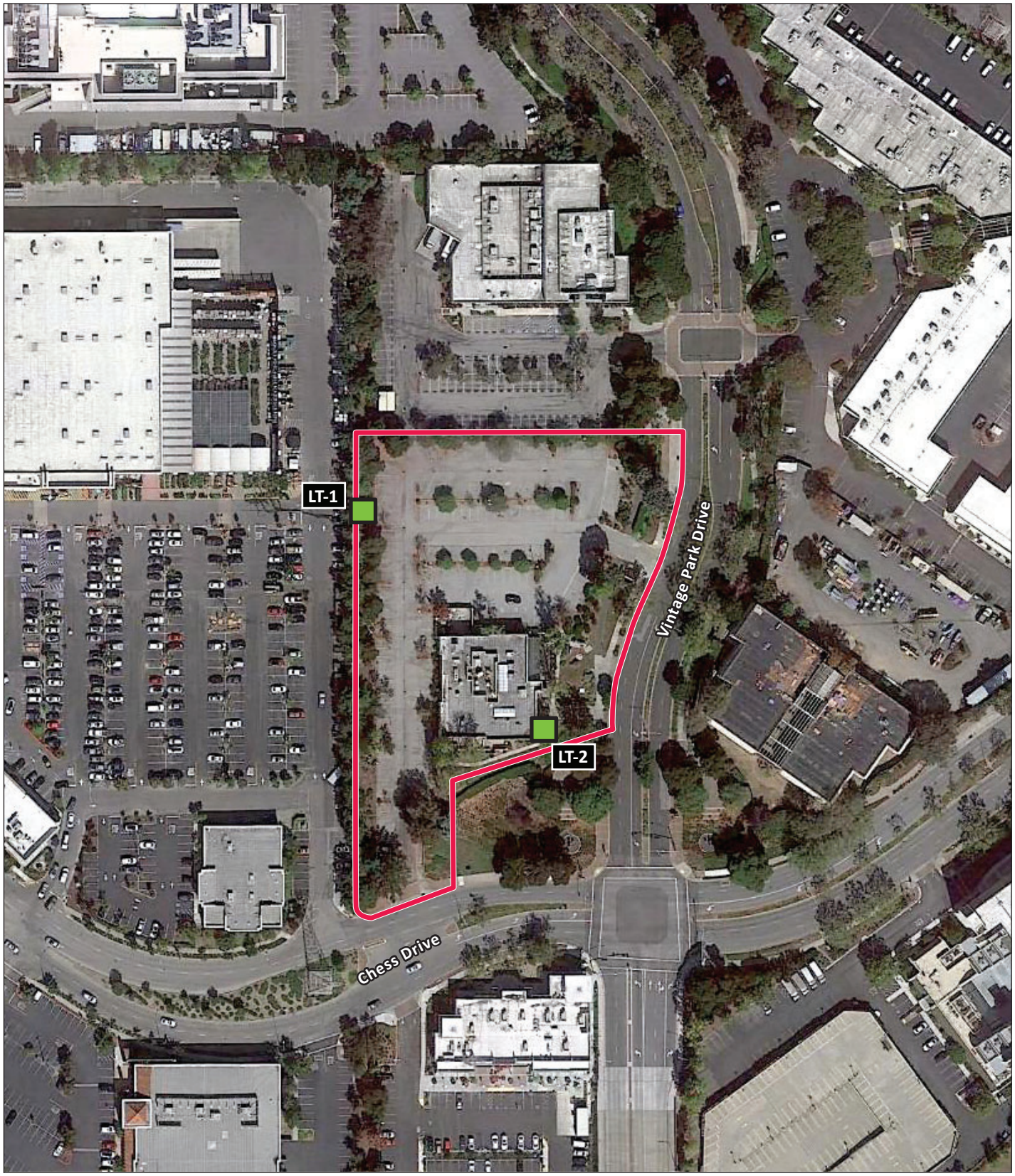
Existing Industrial/Office Noise. Industrial land uses in Foster City are limited primarily to light industrial operations (e.g., manufacturing, distribution, storage). Rooftop mechanical equipment noise from Gilead Sciences' buildings to the northwest of the project site are audible and contribute to noise levels in the vicinity.

Existing Sensitive Land Uses. Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, transient lodging, educational facilities, hospitals, childcare facilities, and senior housing. The project site is surrounded by commercial, office, and light industrial uses, none of which are considered sensitive uses. The nearest residential uses to the project site are multifamily units approximately 675 feet to the west. Transient lodging uses (TownePlace Suites by Marriott) are 410 feet to the south.

Ambient Noise Level Monitoring. To update and assess the existing noise conditions in the project vicinity, noise measurements were conducted at the project site. Two long-term (24-hour) measurements were taken from June 17, 2021, to June 18, 2021. Additionally, one short-term (15-minute) measurement was taken on June 17, 2021. Based on noise measurement results, the uses in the vicinity of the project site are exposed to noise levels between 59.0 dBA L_{dn} and 64.3 dBA L_{dn} primarily associated with vehicle traffic noise. Figure 4.6-2 shows locations of the noise measurements and the results are summarized in Table 4.6.C. Noise measurement data information is provided in Appendix E of this analysis.

[2] Federal Aviation Administration. 2021. Airport Data and Contact Information. Effective July 15, 2021. Database searched for both public-use and private-use facilities in San Mateo County. Website: http://www.faa.gov/airports/airport_safety/airportdata_5010/, accessed July 19, 2021.

[3] Ibid.



LSA

FIGURE 4.6-2

N

0 100 200
FEET

Project Site Boundary

Long Term Monitoring Locations

388 Vintage Park Drive Project EIR
Noise Monitoring Locations

SOURCES: Google Earth, 9/26/2020; LSA, 2021

P:\CFS2101 388 Vintage Park\PRODUCTS\Graphics\Figure 4.6-2.ai (8/17/2021)

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Table 4.6.C: Existing Noise Level Measurements

Location Number	Location Description	Daytime Noise Levels[1] (dBA L_{eq})	Nighttime Noise Levels[2] (dBA L_{eq})	Average Daily Noise Levels (dBA L_{dn})	Primary Noise Sources
LT-1	Northwest portion of site adjacent to Home Depot parking lot near garden center. Approximately 400 feet from nearest lanes of Chess Drive.	54.9-60.0	49.8–56.6	61.5	Home Depot activity, rooftop mechanical equipment (tonal) from Gilead Sciences buildings, distant traffic
LT-2	Southeast corner of existing building on site, 110 feet from center of Vintage Park Drive.	54.6-58.6	45.9-54.7	59.0	Traffic along Vintage Park Drive and Chess Drive
ST-1[3]	Southwest corner of site, 32 feet from center of Chess Drive	60.6-64.6	51.9-60.7	64.3	Traffic on Chess Drive and the entrance/exit for commercial parking lots

Source: Compiled by LSA (July 2021).
[1] Daytime Noise Levels = noise levels during the hours of 7:00 a.m. to 7:00 p.m.
[2] Nighttime Noise Levels = noise levels during the hours of 10:00 p.m. to 7:00 a.m.
[3] Short-term measurement data estimated based on corresponding long-term measurement intervals.
L_{dn} = Day/Night Noise Level
dBA = A-weighted decibels

4.6.1.4 Regulatory Framework

The following section provides brief discussions of the federal and local regulatory framework related to noise.

Federal Transit Administration. The criteria for environmental impacts resulting from ground-borne vibration and noise are based on the maximum levels for a single event. The City of Foster City's (City) Municipal Code does not include specific criteria for assessing vibration impacts associated with structural damage. Therefore, for the purpose of determining the significance of vibration impacts experienced at sensitive uses surrounding the project site, the guidelines within the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) (FTA Manual) have been used to determine vibration impacts associated with potential damage and are presented in Table 4.6.D below.

Table 4.6.D Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), Table 12-3.
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inches per second

The FTA Manual guidelines show that a vibration level of up to 0.12 inches per second (in/sec) in PPV is considered safe for buildings extremely susceptible to vibration damage and would not result in any construction vibration damage. Therefore, to be conservative, the 0.12 in/sec in PPV threshold has been used when evaluating vibration impacts at the nearest structures to the site (i.e., an approved storage building north of the project site).

To provide numerical thresholds related to ground-borne vibration impacts, criteria included in the FTA Manual for human annoyance are shown in Table 4.6.E. The criteria account for the variation in project types as well as the frequency of events, which differ widely among projects. It is logical that when there would be fewer events per day, it should take higher vibration levels to evoke the same community response. The variation in project times and the frequency of events is accounted for in the criteria by distinguishing between projects with frequent and infrequent events, in which the term "frequent events" is defined as more than 70 events per day.

Table 4.6.E Ground-Borne Vibration Impact Criteria for General Assessment

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 µin/sec)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB[4]	65 VdB[4]	65 VdB[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), Table 8-1.

[1] Frequent events are defined as more than 70 vibration events of the same source per day. Most rapid transit projects fall into this category.

[2] Occasional events are defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.

[3] Infrequent events are defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.

[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.

µin/sec = microinches per second
FTA = Federal Transit Administration
HVAC = heating, ventilation, and air-conditioning
VdB = vibration velocity decibels

City of Foster City. The City addresses noise in the Noise Element of the General Plan[4] and in the Municipal Code. In addition, the City of Foster City has standard Conditions of Approval (COAs) that would be applicable to the proposed project.

Foster City General Plan. The goals, policies and programs listed in the Noise Element that are applicable to the proposed project are summarized as follows:

- The Land Use Compatibility Standards identify acceptable noise exposure levels for new development according to land use. Community noise exposure levels up to 65 dBA L_{dn} are considered normally acceptable for office buildings, businesses, and commercial uses. Interior

[4] Foster City, City of, 1993. *Foster City General Plan*, *Chapter 6: Noise Element*. May.

noise levels are a function of the use of space, and offices should generally be limited to 45 dBA L_{eq} or less.

- The noise environment in existing residential areas is required to be protected. The City requires mitigation measures for projects that would cause the L_{dn} to increase by 3 dBA or more where noise levels would exceed or currently exceed 60 dBA L_{dn}.

Foster City Municipal Code. The City's Municipal Code[5] has established regulations in the Noise Section (17.68.030) to regulate noise created within the city to surrounding sensitive receptors. Table 4.6.F below presents the noise limits.

Table 4.6.F: Noise Limits From the City Municipal Code

Receiving Land Use Category	Time Period	Exterior Noise Level Standards (dBA)	
		Any time duration greater than 3 minutes	Any time duration less than 3 minutes
One or two-family residential	10:00 p.m. – 7:30 a.m.	50	55
	7:30 a.m. – 10:00 p.m.	60	65
Multi-family, public space	10:00 p.m. – 7:30 a.m.	55	60
	7:30 a.m. – 10:00 p.m.	60	65
Commercial, office	10:00 p.m. – 7:30 a.m.	60	65
	7:30 a.m. – 10:00 p.m.	65	70
Light industrial	10:00 p.m. – 7:30 a.m.	65	70
	7:30 a.m. – 10:00 p.m.	70	75

Source: Foster City Municipal Code. Section 17.68.030

Section 17.68.030(E), Prohibited Acts, states that Operation of construction equipment is permitted only in a residential zone or within 100 feet of a residential zone between the hours of 7:30 a.m. and 8:00 p.m. on weekdays and between the hours of 9:00 a.m. and 8:00 p.m. on weekends and legal holidays. Additionally, noise from construction must not exceed 100 dB at the noise producer's property plane unless prior authorization is obtained.

Section 17.68.040, Vibration, states that no vibration shall be permitted to cause a noticeable tremor, measurable without instruments at the lot line. Because the City does not have established specific vibration impact criteria, the FTA criteria presented above will be used to assess potential damage and human annoyance during construction activities.

Foster City Standard Conditions of Approval. The following COAs adopted by the City require implementation of noise controls during project construction and operation:

- **COA 2.9:** The construction contractor shall designate a "noise disturbance coordinator" who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaints (e.g., beginning work too early, bad muffler) and institute reasonable measures warranted to correct the

[5] Foster City, City of, 2021a. *Foster City Municipal Code*. May 17.

problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site. The construction contractor shall protect all downstream sanitary sewer lines from construction debris while performing sanitary sewer construction. Means to prevent construction debris must be used and shall be inspected by the construction inspector.

- **COA 2.17:** Prior to commencement of any site work or placement of any construction trailers, the applicant shall submit a Site Logistics Plan showing proposed haul routes, placement of the construction trailers (if any) and areas for materials/equipment materials/ equipment delivery, materials/equipment storage, waste collection and maintenance/fueling of vehicles/equipment. The Site Logistics Plan shall be subject to approval by the Community Development Director.

    - The Site Logistics Plan designated storage areas for material delivery, storage, and waste collection shall be as far away from catch basins, gutters, drainage courses, and water bodies as possible. All hazardous materials and wastes used or generated during project site development activities shall be labeled and stored in accordance with applicable local, state, and federal regulations. In addition, an accurate up-to-date inventory, including Material Safety Data Sheets, shall be maintained on-site to assist emergency response personnel in the event of a hazardous materials incident.

    - The Site Logistics Plan designated area for all maintenance and fueling of vehicles and equipment shall be bermed or over a drip pan that will not allow run-off of spills. Vehicles and equipment shall be regularly checked and have leaks repaired promptly at an off-site location. Secondary containment shall be used to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.

    - The Site Logistics Plan shall locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

- **COA 7.1:** Three (3) sets of an acoustical analysis, including one electronic or pdf version, shall be submitted, prepared by a licensed professional, specifying the manner in which interior noise levels will be reduced to the required Community Noise Equivalency Level (CNEL) per Title 24 of the California Administrative Code and Chapter 17.68 of the Foster City Municipal Code. The details of noise attenuation recommended in the report will be subject to the review and approval of the Chief Building Official.

- **COA 9.1:** Construction activities shall be limited to the hours of 8 a.m. to 5 p.m. on weekdays unless deviations from this schedule are approved in advance by the City. Nonconstruction activities may take place between the hours of 7 a.m. and 8 a.m. on weekdays and 9 a.m. and 4 p.m. on Saturdays but must be limited to quiet activities and shall not include the use of engine-driven machinery. No actual construction activities may take place between 7 a.m. and 8 a.m., except when post-tension slab foundations are being poured, the concrete pumper may be set up but no concrete may be poured. Forklifts shall be allowed to operate onsite between the hours of 5:00 p.m. and 6:30 p.m. on weekdays.

The Planning Commission reserves the right to rescind this condition and further restrict construction activities in the event that the public health, safety and welfare are not protected due to noise levels emanating from the construction project.

  - **9.1.1:** Any requested deviations from the allowed hours for construction activities shall be submitted to the Community Development Director a minimum of two (2) working days in advance for review and approval. Any approved deviations from the allowed hours shall be communicated to the Building Inspection Division and the Police Department.

- **COA 9.2:** In order to minimize construction noise impacts, all engine-driven construction vehicles, equipment and pneumatic tools shall be required to use effective intake and exhaust mufflers; equipment shall be properly adjusted and maintained; all construction equipment shall be equipped with mufflers in accordance with OSHA standards.

- **COA 9.4:** The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

- **COA 9.5:** The following controls shall be implemented at all construction sites within the project to control dust and/or mud production and fugitive dust.

  - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations (CCR). Clear signage shall be provided for construction workers at all access points.

- **COA 11.05:** Truck arrival and unloading operations shall be conducted in accordance with all applicable City Ordinance requirements. If noise associated with truck arrival or unloading operations becomes a problem, all future site lessees, operators and/or owners shall work with the City to develop a plan to minimize noise, including requiring an adjustment of truck arrival and/or unloading times.

4.6.2 Impacts and Mitigation Measures

This section discusses potential noise and vibration impacts that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents potential impacts associated with implementation of the proposed project and identifies applicable COAs and/or mitigation measures, as appropriate.

4.6.2.1 Criteria of Significance

The project would have a significant impact on noise if it 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 General Plan or the Municipal Code, and/or the applicable standards of other agencies;

2) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels; or

3) The location of a project within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, so that the project would result in exposure of people residing or working in the project area to excessive noise levels.

In *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, the California Supreme Court concluded that CEQA generally does not require analysis or mitigation of the impact of existing environmental conditions on a project, including a project's future users or residents.[6] However, as with other laws and regulations enforced by other agencies that protect public health and safety, the City as the lead agency has authority, other than CEQA, to require measures to protect public health and safety. Therefore, this document includes an evaluation of the environment's impacts on the proposed project. The evaluation includes an assessment of the project's potential to locate office land uses in an area considered to be "conditionally acceptable" in the City's noise and land use compatibility standards.

4.6.2.2 Project Impacts

The following section discusses the potential noise and vibration impacts associated with implementation of the proposed project.

1) Generate an increase in ambient noise conditions in excess of established standards

The following describes the short-term construction and long-term operational noise impacts of the proposed project. As discussed, these impacts would be less than significant with implementation of recommended mitigation measures.

Short-Term (Construction) Noise Impacts. Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Impact NOI-1: Noise from construction activities at the project site would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (S)

Short-term noise impacts would occur during demolition, grading, paving, and site preparation activities. Table 4.6.G lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise

[6] California Supreme Court. 2015. *California Building Industry Association v. Bay Area Air Quality Management District 62 Cal.4th 369, Case No. S213478*. December.

receptor, obtained from the Federal Highway Administration Roadway Construction Noise Model.

Table 4.6.G: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Impact Pile Drivers	20	95
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (Federal Highway Administration 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
[1] Maximum noise levels were developed based on Specification 721.560 from the Central Artery/Tunnel program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project has been completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 4.6.G, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during demolition, excavation, grading, paving, foundation installation, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the

dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.6.G lists the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 feet between the construction equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1–2 minutes of full power operation followed by 3–4 minutes at lower power settings.

In addition to the reference maximum noise level, the usage factor provided in Table 4.6.G is used to calculate the hourly noise level impact for each piece of equipment based on the following equation:

$$L_{eq}(equip) = E.L. + 10\log(U.F.) - 20\log\left(\frac{D}{50}\right)$$

where: $L_{eq}(equip)$ = L_{eq} at a receiver resulting from the operation of a single piece of equipment over a specified time period

E.L. = Noise emission level of the particular piece of equipment at a reference distance of 50 ft

U.F. = Usage factor that accounts for the fraction of time that the equipment is in use over the specified period of time

D = Distance from the receiver to the piece of equipment

Each piece of construction equipment operates as an individual point source. Using the following equation, a composite noise level can be calculated when multiple sources of noise operate simultaneously:

$$Leq\ (composite) = 10 * \log_{10}\left(\sum_{1}^{n} 10^{\frac{Ln}{10}}\right)$$

Table 4.6.H shows the composite noise levels of the pieces of equipment for each construction phase at a distance of 50 feet from the construction area. Once composite noise levels are calculated, reference noise levels can then be adjusted for distance using the following equation:

$$Leq\ (at\ distance\ X) = Leq\ (at\ 50\ feet) - 20 * \log_{10}\left(\frac{X}{50}\right)$$

In general, this equation shows that doubling the distance would decrease noise levels by 6 dBA while halving the distance would increase noise levels by 6 dBA.

Table 4.6.H shows the construction phases, the expected duration of each phase, the equipment expected to be used during each phase, the composite noise levels of the equipment at 50 feet,

the distances of the nearest residential buildings from the nearest location of construction activities, and corresponding noise levels expected during each phase of construction. These noise level projections do not take into account intervening topography or barriers. Appendix E provides construction noise calculations.

Table 4.6.H: Construction Noise Levels by Phase

Phase	Duration (days)	Equipment	Composite Noise Level at 50 ft (dBA L_{eq})	Distance to 100 dBA Contour (ft)	Noise Level at Hotel Receptor 410 ft south (dBA L_{eq})	Noise Level at Multifamily Receptor 675 ft west (dBA L_{eq})
Demolition	20	1 Dozer, 2 Backhoes, Tractor, Front Loader, Saws	83	7	65	61
Site Preparation	3	1 Grader, 1 Scraper, Tractor/Loader/Backhoe	85	9	67	63
Grading	6	1 Grader, 2 Backhoes, 1 Dozer	82	7	64	60
Building Construction	220	1 Crane, 2 Forklifts, 1 Generator Set, 1 Tractor/Loader/Backhoe, 3 Welders	82	7	64	60
Paving	10	1 Concrete Mixer, 1 Paver, 2 Rollers, 1 Tractor/Loader/Backhoe	85	9	66	62
Architectural Coating	10	1 Compressor	81	6	63	58

Source: Compiled by LSA (2021).
[1] Distances are from the nearest edge of the project site. Residential zoned properties would be beyond 100 ft from the edge of construction activity.
dBA L_{eq} = average A-weighted hourly noise level
ft = foot/feet

It is expected that average noise levels during construction at the nearest sensitive receptors, the hotel guest rooms to the south, would approach 67 dBA L_{eq} during the site preparation phase, which would take place for a duration of approximately 3 days. Average noise levels during other construction phases would range from 63 dBA L_{eq} to 66 dBA L_{eq}. Average noise levels at the multifamily residences to the west would range from 58 dBA L_{eq} to 63 dBA L_{eq} during all phases of construction. These noise levels have the potential to exceed existing hourly noise levels at surrounding sensitive receptors.

As discussed above, the City requires that construction activity within 100 feet of residential land uses must not exceed 100 dB at the producer's property plane unless prior authorization is obtained. Although most heavy construction equipment would operate in the middle of the project site and would generate noise levels at the property line of less than 100 dBA, nearby off-site receptors may be perceived as much louder when equipment operates closer to the property boundary. Although residential land uses are further than 100 feet away from the site, there is potential for construction equipment noise levels to exceed 100 dB at the project site's

property plane when louder equipment is used within approximately 10 feet of the project site boundaries.

COA 2.9 specifies required measures to address and track construction noise complaints during construction by designating a noise disturbance coordinator. COA 9.1 provides limits on the days and hours of construction to avoid generating noise when it would be most objectionable to neighboring residences and occupants of the nearby existing hotel. COA 9.2 requires all engine-driven construction vehicles, equipment, and pneumatic tools to use effective intake and exhaust mufflers; to be properly adjusted and maintained; and to be equipped with mufflers in accordance with OSHA standards. COA 9.10 requires the greatest possible distance between the stationary construction equipment and the sensitive receptors near the project site. COA 2.17 requires the greatest possible distance between the staging areas and the sensitive receptors near the project site. COA 9.5 limits idling times to no longer than 5 minutes when not in use.

Implementation of the above COAs would reduce construction-period noise at the nearby sensitive receptors to the extent feasible. However, the amount of noise reduction that would result from implementation of the COAs is not practicably quantifiable, and the construction of the proposed project could still generate noise levels that conflict with the maximum noise limits at the producer's property plane established by Foster City Municipal Code regulations. As a result, the potential of the proposed project to generate noise levels that would exceed City regulations is considered significant.

Therefore, implementation of the following mitigation measure would be required to further reduce potential construction-period noise impacts for the indicated sensitive receptors.

Mitigation Measure NOI-1: The project contractor shall implement the following measures, where feasible, during construction of the project:

- Electrical power, rather than diesel equipment, shall be used to run compressors and similar power tools and to power temporary structures, such as construction trailers or caretaker facilities.
- All noise from workers' radios shall be controlled to a point that they are not audible at sensitive receptors near construction activity.
- Mobile construction equipment shall have smart back-up alarms that automatically adjust the sound level of the alarm in response to ambient noise levels. (LTS)

Implementation of the City's COAs and Mitigation Measure NOI-1 would ensure that construction activity is limited to the less noise-sensitive periods of the day and that potential construction-period noise experienced by noise-sensitive receptors is reduced to the extent feasible. With implementation of the City's COAs and Mitigation Measure NOI-1, construction period noise generated by the proposed project would be temporary, reduced to the extent

feasible, and would comply with the City's construction noise requirements; therefore, this impact would be less than significant.

Operational Noise Impacts. The project would generate long-term noise impacts from traffic, stationary, and other operational noise sources, as discussed below.

Traffic Noise Impacts. Motor vehicles with their distinctive noise characteristics are the dominant noise source in the project vicinity. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer.

Implementation of the proposed project would result in new daily trips on local roadways in the project site vicinity, as estimated in the Transportation Impact Assessment (TIA)[7] prepared for the proposed project. Average daily trips for existing and existing plus project scenarios were calculated for 4 intersections and 16 roadway segments studied in the TIA. Of the 16 roadway segments calculated, project traffic along Chess Drive east of Foster City Boulevard would cause the highest increase in noise levels, approximately 0.2 dBA L_{dn} based on the following equation:

$$Change\ in\ (dBA) = 10 * \log_{10}\left(\frac{Future\ Volume}{Current\ Volume}\right)$$

Noise levels would increase by 0.2 dBA L_{dn} or less on all other roadway segments studied, and daily project trips would not result in a perceptible noise increase along any roadway segment in the project vicinity. Therefore, traffic noise impacts as a result of the project would be less than significant.

Stationary Source Noise Impacts. Stationary noise sources associated with the proposed project could include heating, ventilation, and air conditioning (HVAC) mechanical equipment and social activities on the proposed roof terrace.

Of the on-site stationary noise sources during operation of the project, noise from parking lot activities would generate the most consistent noise levels. Based on reference noise measurements LSA previously conducted, HVAC related noise would generate noise levels of approximately 75 dBA L_{eq} at 3 feet.

The proposed project would include a roof terrace, the use of which could cause an increase in ambient noise levels in the vicinity of the project site with social activities or company events. Recreational activity, including voices, typically generates maximum noise levels of 70 dBA L_{max} at 50 feet.

The closest sensitive receptors include the hotel guest rooms across Chess Drive, approximately 520 feet south of the proposed terrace. Adjusted for distance, the nearest sensitive receptors would be exposed to a noise level of approximately 30 dBA L_{eq} generated

7 Fehr & Peers. 2021. 388 Vintage Park Drive Transportation Impact Assessment. October 8.

by HVAC operations and 50 dBA L_{max} generated by recreational activities. With a noise level of 30 dBA L_{eq} associated with HVAC noise operations, noise levels would be below both the daytime and nighttime noise standards of 60 dBA L_{eq} and 55 dBA L_{eq} for sources that operate for more than 3 minutes in a given hour. Additionally, noise levels of 50 dBA L_{max} generated due to recreational activities on the project's roof terrace are expected to occur during the daytime hours of 7:30 a.m. and 10:00 p.m. only, and would be less than the 65 dBA noise standard for noise lasting 3 minutes or less. Lastly, these activities would not cause an increase in noise levels of more than 3 dBA. Therefore, it is not expected that the proposed project would substantially increase noise levels over existing conditions, would comply with the City's Municipal Code standards, and impacts would be less than significant.

Land Use Compatibility Assessment. The City sets forth normally acceptable noise level standards for land use compatibility and noise exposure of new developments. As identified above, the project site is exposed to noise levels between 59.0 dBA and 64.3 dBA L_{dn}, primarily associated with vehicle traffic noise. Based on the City's noise and land use compatibility standards, noise levels up to 65 dBA L_{dn} are considered normally acceptable for office buildings and business commercial uses. Therefore, the proposed office land use is compatible with the City's noise standards and implementation of COA 7.1 is not required.

2) Generate excessive groundborne vibration

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.Typical sources of ground-borne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, ground-borne vibration from standard construction practices would result in impacts when construction takes place within 25 feet of sensitive structures. Ground-borne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of older buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant ground-borne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause ground-borne vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the

proposed project would not contain uses that would generate ground-borne vibration. This impact would be less than significant.

Construction Vibration. Construction of the proposed project could result in the generation of ground-borne vibration. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and assesses the potential for building damages using vibration levels in PPV (in/sec). As shown in Table 4.6.D., the FTA Manual guidelines indicate that a vibration level up to 0.5 in/sec PPV is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 0.2 in/sec PPV. Additionally, as shown in Table 4.6.E, the FTA Manual, the level at which annoyance would occur within residences and buildings where people normally sleep is 72 VdB for frequent events.

Table 4.6.I shows the reference PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 4.6.I, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB or 0.089 PPV in/sec of ground-borne vibration when measured at 25 feet, based on the FTA Manual.

Table 4.6.I: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_V (VdB)[1]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).
[1] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
µin/sec = microinches per second
FTA = Federal Transit Administration
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

Outdoor site preparation for the proposed project is expected to include the use of bulldozers and loaded trucks. The greatest levels of vibration are anticipated to take place during the site preparation and grading phases. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the location where construction equipment would be used. The formula for vibration transmission is provided below.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30\ Log\ (D/25)$$
$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

The closest structure to the proposed building is the office building across Vintage Park Drive, which is approximately 150 feet east of the proposed building. Based on distance attenuation, the receptors would experience vibration levels of up to 0.044 PPV. This vibration level at the closest structures from construction equipment would not exceed the FTA threshold of 0.2 in/sec PPV for building damage.

Additionally, at a distance of 150 from construction activities, vibration levels would be up to 64 VdB and would remain below the 72 VdB annoyance thresholds. Furthermore, construction of the project would be subject to COA 2.9 and COA 9.1. Implementation of COA 2.9 would allow sources of potentially disruptive construction vibration to be quickly controlled or eliminated by designating a noise disturbance coordinator who will determine the cause of the noise/vibration complaints and institute reasonable measures warranted to correct the problem. COA 9.1 limits construction hours to between 8:00 a.m. and 5:00 p.m. on weekdays, which would limit any impacts to normal daytime hours, thereby reducing the likelihood of disturbing nearby sensitive receptors (i.e., through interfering with sleep). Therefore, with compliance with COA 2.9 and COA 9.1, ground-borne vibration impacts from construction activities associated with the proposed project would be less than significant.

3) Exposure to excessive noise levels due to proximity to an airport

As previously discussed, the project site is 3.7 miles north of the San Carlos Airport and approximately 5.5 miles southeast of SFO.[8] The site is within Area A of the AIA Boundary of the San Carlos Airport, where requirements for real estate disclosure are mandatory due to potential noise issues. The project site is also within Area B of the AIA Boundary of SFO, where land development proposals shall be reviewed by the Airport Land Use Commission. In addition, real estate disclosures are also mandatory. Although aircraft-related noise is occasionally audible on the project site, the site does not lie within the 65 dBA CNEL noise contours[9,10] of either of these airports. Therefore, the proposed project would not expose people working in or visiting the project area to excessive noise levels and no impact would occur.

4.6.2.3 Cumulative Impacts

For the topic of noise, the scope for assessing cumulative impacts encompasses past, current, or probable future projects under review by the City and near the project site, as well as applicable planning level documents that affect the transportation network (i.e., land use assumptions from the General Plan that would increase trips on area roadways, thereby increasing traffic noise). As described above, project trips would represent a small increase in noise levels, up to approximately 0.2 dBA L_{dn}, which would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. Given the small increase in noise levels generated by the proposed

8 Federal Aviation Administration. 2021. Airport Data and Contact Information. Effective July 15, 2021. Database searched for both public-use and private-use facilities in San Mateo County. Website: http://www.faa.gov/airports/airport_safety/airportdata_5010/ (accessed July 19, 2021).

9 City/County Association of Governments of San Mateo County, 2015. *Comprehensive Airport Land Use Compatibility Plan For the Environs of San Carlos Airport.* October.

10 City/County Association of Governments of San Mateo County, 2012. *Comprehensive Airport Land Use Compatibility Plan For the Environs of San Francisco International Airport.* November.

project on the transportation network and location of cumulative projects (see discussion in the introduction to Chapter 4, Setting, Impacts and Mitigation Measures) and anticipated increase in traffic noise anticipated in the vicinity, the proposed project would not result in a cumulatively considerable increase in transportation-related noise.

A significant cumulative impact would also occur if implementation of the proposed project would combine with other cumulative development projects to result in a permanent increase of 3 dBA or more in ambient noise levels at the existing sensitive receptors in the project site vicinity that are currently exposed to noise levels above the City's normally acceptable threshold for that type of land use. As discussed above, long-term operation of the proposed project would not create a significant increase in stationary source noise, including noise associated with recreational activities, parking lot activities, and HVAC equipment. Because cumulative development projects are not immediately adjacent to the project site, permanent increases in noise generated by these projects would not combine with the noise levels generated by the proposed project to create a cumulatively considerable increase in ambient noise levels, and this impact would be less than significant.

With implementation of Mitigation Measure NOI-1 and the City's applicable COAs, the proposed project would not result in adverse noise impacts from construction activities. Although the proposed project may be under construction at the same time as one or more cumulative development projects, each project would be required to implement similar measures as those identified in Mitigation Measure NOI-1 to ensure that construction noise levels are reduced to the extent feasible and to ensure that construction activities comply with the City's Noise Ordinance. In addition, construction-related noise impacts would be temporary and would no longer occur once construction of each project is completed. Therefore, construction activities would not be considered a cumulatively considerable contribution to the total noise environment in the project site vicinity and this impact would be less than significant.

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4.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes existing conditions related to hazards and hazardous materials at the project site; discusses the applicable federal, State, regional and local regulatory considerations; and evaluates the potential impacts of the proposed project related to hazards and hazardous materials during both construction and operation. It identifies, where appropriate, standard Conditions of Approval (COAs) and/or mitigation measures to reduce or avoid significant impacts.

4.7.1 Setting

This section describes the existing conditions related to hazards and hazardous materials at and near the project site, as well as the applicable federal, State, regional and local regulatory framework.

4.7.1.1 Historical and Current Land Uses

The project site vicinity was historically marshland, which was dried out and was converted to hay fields for a dairy farm in the early 1900s. In the late 1950s, the project site vicinity was artificially filled with dredged sand to create buildable lands.[1] The existing building on the project site was constructed in 1985 and was originally leased by El Torito restaurant, which occupied the project site until 2018. The project site has been vacant since about 2018. No documented hazardous materials releases or subsurface contamination have been reported at the project site.[2]

4.7.1.2 Regulatory Framework

The use, storage, and disposal of hazardous materials, including management of contaminated soils and groundwater, is regulated by numerous federal, State, and local laws and regulations. The following describes the applicable federal, State, and regional agencies' jurisdiction in the management of hazards and hazardous materials is described below.

Federal. At the federal level, the United States Environmental Protection Agency (USEPA) administers hazardous materials and hazardous waste regulations, the Occupational Safety and Health Administration (OSHA) regulates worker safety related to hazardous materials handling, and the United States Department of Transportation (DOT) regulates hazardous waste transportation.

> ***United States Environmental Protection Agency.*** The USEPA is the federal agency responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials and hazardous waste. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations. The legislation includes the Resource Conservation and Recovery Act (RCRA) of 1976; the Toxic Substances Control Act of 1976; the Comprehensive Environmental Response, Compensation, and Liability Act of 1980; and the Superfund Amendments and Reauthorization Acts of 1986. The USEPA provides oversight for site

[1] Tom Origer & Associates. 2016. Historical Evaluation of the Foster City Levees San Mateo County, California. June 21.

[2] Haley & Aldrich, Inc. 2020. Draft Report on ASTM Phase I Environmental Site Assessment, 388 Vintage Park Drive, Foster City, California. October.

investigation and remediation projects, and has developed protocols for sampling, testing, and evaluating solid wastes.[3]

Occupational Safety and Health Administration. OSHA regulates worker health and safety at the federal level. The federal Occupational Safety and Health Act of 1970 authorizes the states to establish their own safety and health programs with OSHA approval. Worker health and safety protections in California are regulated by the California Occupational Safety and Health Administration (Cal/OSHA), as described below. California standards for workers dealing with hazardous materials are contained in Title 8 of the California Code of Regulations (CCR); they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

Department of Transportation. In 1990 and 1994, the federal Hazardous Material Transportation Act was amended to improve the protection of life, property, and the environment from the inherent risks of transporting hazardous material in all major modes of commerce. The DOT developed hazardous materials regulations, which govern the classification, packaging, communication, transportation, and handling of hazardous materials, as well as employee training and incident reporting. The transportation of hazardous materials is subject to both RCRA and DOT regulations. The California Highway Patrol, California Department of Transportation, and the Department of Toxic Substances Control (DTSC) are responsible for enforcing federal and State regulations pertaining to the transportation of hazardous materials.

State Agencies. At the State level, the California Environmental Protection Agency (CalEPA), which includes DTSC and the State Water Resources Control Board (State Water Board), administers hazardous materials and hazardous waste regulations, the California Air Resources Board (CARB) regulates air pollution control programs, Cal/OSHA regulates worker safety related to hazardous materials handling, and the California Office of the State Fire Marshal (OSFM) develops and implements fire prevention engineering, education, and enforcement.

Department of Toxic Substances Control. In California, the DTSC is authorized by the USEPA to enforce and implement federal hazardous materials laws and regulations. California regulations pertaining to hazardous materials are generally as stringent as, or more stringent than, the federal regulation requirements. Most State hazardous materials regulations are contained in Title 22 of the CCR. The DTSC generally acts as the lead agency for soil and groundwater cleanup projects that have the potential to affect public health and establishes cleanup levels for subsurface contamination that are equal to, or more restrictive than, federal levels. The DTSC

[3] United States Environmental Protection Agency, 2021. Hazardous Waste Test Methods/ SW-846. Website updated June 8, 2020. Website: www.epa.gov/hw-sw846 (accessed July 16, 2021).

has also developed land disposal restrictions and treatment standards for hazardous waste disposal in California.

State Water Resources Control Board. The State Water Board enforces regulations on implementation of underground storage tank programs. It also allocates funding to eligible parties that request reimbursement of costs to clean up soil and groundwater pollution from underground storage tank leaks. The State Water Board also enforces the Porter-Cologne Water Quality Act through its nine Regional Water Boards.

California Air Resources Board. The CARB is responsible for coordination and oversight of State and local air pollution control programs in California, including implementation of the California Clean Air Act of 1988. CARB has developed State air quality standards and is responsible for monitoring air quality in conjunction with the local air districts.

California Occupational Safety and Health Administration. Cal/OSHA regulates worker health and safety protections in California. California standards for workers dealing with hazardous materials are contained in Title 8 of the CCR; they include practices for all industries (General Industrial Safety Orders), as well as specific practices for construction. Workers at hazardous waste sites (or workers who may be exposed to hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to OSHA Hazardous Waste Operations and Emergency Response regulations. Additional regulations have been developed for construction workers potentially exposed to lead and asbestos. Cal/OSHA enforcement units conduct on-site evaluations and issue notices of violation to enforce necessary improvements to health and safety practices.

California Office of the State Fire Marshal. The OSFM is the CAL FIRE program that protects life and property through the development and application of fire prevention, engineering, training and education, and enforcement. The OSFM regulates buildings in which people live, congregate, or are confined; controls substances which may, in and of themselves or by their misuse, cause injuries, death and destruction by fire; provides statewide direction for fire prevention within wildland areas; regulates hazardous liquid pipelines; develops and reviews regulations and building standards; and provides training and education in fire protection methods and responsibilities.

Regional and Local Agencies. The following regional and local agencies have regulatory authority over the proposed project's management of hazardous materials and hazards.

San Francisco Bay Regional Water Quality Control Board. The San Francisco Bay Regional Water Quality Control Board is one of the nine Regional Water Boards that protect Waters of the State in accordance with the Porter-Cologne Water Quality Act of 1969. The Regional Water Boards can act as a lead agency to provide oversight of sites where the quality of groundwater or surface waters is threatened and have the authority to require investigations and remedial actions. The San Francisco Bay Regional Water Quality Control Board has developed Environmental Screening Levels (ESLs) for residential and non-residential land uses to help expedite the preparation of environmental risk assessments at sites where contaminated soil and groundwater have been identified.

Bay Area Air Quality Management District. The Bay Area Air Quality Management District (BAAQMD) has primary responsibility for control of air pollution from sources other than motor vehicles and consumer products (which are the responsibility of the USEPA and the CARB). BAAQMD is responsible for preparing attainment plans for non-attainment criteria pollutants, controlling stationary air pollutant sources, and issuing air quality permits for various activities including asbestos demolition and renovation activities (District Regulation 11, Rule 2).

San Mateo County Environmental Health Services. San Mateo County Environmental Health Services (SMCEHS) is the primary agency responsible for local enforcement of State and federal laws pertaining to hazardous materials management, including in Foster City. SMCEHS is a Certified Unified Program Agency; it is responsible for the Hazardous Materials Business Plan Program, the Hazardous Waste Generator Program, the Tiered Permitting Program, the Underground Storage Tank Program, the California Accidental Release Prevention Program, and electronic reporting.[4]

City of Foster City General Plan. The Safety Element of the City of Foster City's (City) General Plan[5] contains the following safety goals, policies, and programs related to hazardous materials, fire, and emergency preparedness.

- **Goal S-B:** Emergency Response. Maintain an effective emergency response program that anticipates the potential for disasters and ensures the ability to respond promptly, efficiently and effectively, to provide continuity of services during and after an emergency.

- **Policy S-B-1:** Emergency Response. The City will prepare to respond to emergencies through the City's Emergency Operations Plan, training, and other measures.

- **Program S-B-1-a**: Emergency Response. The City will prepare to respond to emergencies through use of established procedures, programs of on-going training, periodic exercises of the City's Emergency Operations Plan, and mutual aid agreements.

- **Program S-B-1-b**: Emergency Plan. The City will maintain the City's Emergency Operations Plan indicating responsibilities and procedures for responding to an emergency.

- **Policy S-B-2**: Emergency Preparedness. The City will plan for and provide facilities and materials anticipated to be needed to respond to emergencies.

- **Goal S-C**: Long-term community resilience. Ensure the long-term community resilience of the community by improving the resiliency to hazards, protecting the environment and planning for post-disaster recovery.

[4] County of San Mateo. 2021. Certified Unified Program Agency. Website: https://www.smchealth.org/hazardous-materials-cupa (accessed July 19, 2021).

[5] Foster City, City of. 2016b. Foster City Local Hazard Mitigation Plan & Safety Element. Adopted November 21.

- **Policy S-C-4:** Minimize Loss of Life, Injuries, and Property Damage Due to Fires. The City will minimize loss of life, injuries, and property damage due to fires through review of development proposals, public education, and maintenance of well-trained fire suppression personnel.

- **Program S-C-4-a:** Development Review for Fire Safety. The City will review proposals for new and modified buildings to ensure that fire safety provisions are included as required by the most current uniform codes and local regulations.

- **Program S-C-4-c:** Fire Sprinklers. Require fire sprinklers in all new or substantially remodeled housing, regardless of distance from a fire station.

- **Policy S-C-5:** Hazardous Materials. The City will protect the community from unreasonable risks associated with hazardous materials.

- **Program S-C-5-a:** Hazardous Materials. The City will continue to enforce applicable codes related to hazardous materials.

Emergency Evacuation Plans. According to the Safety Element of the City's General Plan, evacuation routes can include a roadway, waterway, or trail that will allow the orderly removal of people and possessions from an area endangered due to floods, hazardous materials, spills, or other emergency. However, evacuation by water is not likely to be useful in Foster City due to the fact that both the Foster City Lagoon and San Mateo's Marina Lagoon are enclosed waterways and boats suitable for evacuation of large numbers of people are not available. The use of any particular evacuation route would depend on the type and location of a specific emergency, which, if any, routes had sustained damage, and many other factors. Selection of evacuation routes in an emergency would be under the purview of law enforcement and/or the City's Emergency Services Director, usually the City Manager.

Foster City Standard Conditions of Approval. The following COAs related to hazards and hazardous materials, which the City routinely includes as conditions of project approval, would apply to the proposed project. The City is committed to requiring the project contractor(s) to implement these conditions and would require them as conditions to the contract approval.

- **COA 2.17:** Prior to commencement of any site work or placement of any construction trailers, the applicant shall submit a Site Logistics Plan showing proposed haul routes, placement of the construction trailers (if any) and areas for materials/equipment materials/ equipment delivery, materials/equipment storage, waste collection and maintenance/fueling of vehicles/equipment. The Site Logistics Plan shall be subject to approval by the Community Development Director.

    - The Site Logistics Plan designated storage areas for material delivery, storage, and waste collection shall be as far away from catch basins, gutters, drainage courses, and water bodies as possible. All hazardous materials and wastes used or generated during project site development activities shall be labeled and stored in accordance with applicable local, state, and federal regulations. In addition, an accurate up-to-date inventory,

including Material Safety Data Sheets, shall be maintained on-site to assist emergency response personnel in the event of a hazardous materials incident.

- The Site Logistics Plan designated area for all maintenance and fueling of vehicles and equipment shall be bermed or over a drip pan that will not allow run-off of spills. Vehicles and equipment shall be regularly checked and have leaks repaired promptly at an off-site location. Secondary containment shall be used to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.

- The Site Logistics Plan shall locate equipment staging in areas that will create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

- **COA 2.18:** The applicant shall prepare a project-specific Construction Risk Management Plan (CRMP) to protect construction workers, the general public, and the environment from subsurface hazardous materials previously identified and to address the possibility of encountering unknown contamination or hazards in the subsurface. The CRMP shall:

  - Provide procedures for evaluating, handling, storing, testing and disposing of soil and groundwater during project excavation and dewatering activities, respectively;

  - Require the preparation of a project specific Health and Safety Plan that identifies hazardous materials present, describes required health and safety provisions and training for all workers potentially exposed to hazardous materials in accordance with state and federal worker safety regulations, and designates the personnel responsible for Health and Safety Plan implementation;

  - Require the preparation of a Contingency Plan that shall be applied should previously unknown hazardous materials be encountered during construction activities. The Contingency Plan shall be developed by the contractor(s), with the approval of the City and/or appropriate regulatory agency, prior to demolition or issuance of the first building permit. The Contingency Plan shall include provisions that require collection of soil and/or groundwater samples in the newly discovered affected area by a qualified environmental professional prior to further work, as appropriate. The samples shall be submitted for laboratory analysis by a state-certified laboratory under chain-of-custody procedures. The analytical methods shall be selected by the environmental professional. The analytical results of the sampling shall be reviewed by the qualified environmental professional and submitted to the appropriate regulatory agency, if appropriate. The environmental professional shall provide recommendations, as applicable, regarding soil/waste management, worker health and safety training, and regulatory agency notifications, in accordance with local, state, and federal requirements. Work shall not resume in the area(s) affected until these recommendations have been implemented under the oversight of the City of regulatory agency, as appropriate; and

- Designate personnel responsible for implementation of the CRMP. The CRMP shall be submitted to the Fire Department for review and approval prior to construction activities.

- Emergency Preparedness and Response Procedures shall be developed by the contractor(s) for emergency notification in the event of an accidental spill or other hazardous materials emergency during project site preparation and development activities. These Procedures shall include evacuation procedures, spill containment procedures, required personal protective equipment, as appropriate, in responding to the emergency. The contractor(s) shall submit these procedures to the City prior to demolition or development activities.

- **COA 2.19:** The contractor shall prepare a Waste Disposal and Hazardous Materials Transportation Plan prior to construction activities where hazardous materials or materials requiring off-site disposal would be generated. The Plan shall include a description of analytical methods for characterizing wastes, handling methods required to minimize the potential for exposure, and shall establish procedures for the safe storage of contaminated materials, stockpiling of soils, and storage of dewatered groundwater. The required disposal method for contaminated materials (including any lead-based paint, asbestos, or other hazardous building materials requiring disposal), the approved disposal site, and specific routes used for transport of wastes to and from the project site shall be indicated. The Plan shall be prepared prior to demolition or development activities and submitted to the City.

- **COA 3.1:** Prior to issuance of a demolition permit for structures located on the project site, a lead-based paint, hazardous building materials survey (PCBs, mercury), and asbestos survey (for those structures not previously surveyed) shall be performed by a qualified environmental professional. Based on the findings of the survey, all loose and peeling lead-based paint, and identified asbestos hazards shall be abated by a certified contractor in accordance with local, state, and federal requirements (including the requirements of the BAAQMD, District Regulation 11, Rule 20) and requirements for worker health and safety.

- **COA 3.4:** Hazardous materials and wastes generated during demolition activities, such as fluorescent light tubes, mercury switches, lead based paint, asbestos containing materials, and PCB wastes, and subsurface hazardous building materials generated during grading and trenching activities, such as asbestos-cement piping, shall be managed and disposed of in accordance with the applicable universal waste and hazardous waste regulations. Federal and state construction worker health and safety regulations shall apply to the removal of hazardous building materials and demolition activities, and any required worker health and safety procedures shall be incorporated into the contractor's specifications for the project. Documentation of the surveys and abatement activities shall be provided to the City prior to the demolition of structures located at the project site.

- **COA 9.13:** If the presence of hazardous materials is found on site, site remediation may be required by the applicable state or local regulatory agencies. Specific remedies would depend on the extent and magnitude of contamination and requirements of the regulatory

agency(ies). Under the direction of the regulatory agency(ies) and the City, a Site Remediation Plan shall be prepared, as required, by the applicant. The Plan shall: 1) specify measures to be taken to protect workers and the public from exposure to the potential hazards and, 2) certify that the proposed remediation would protect the public health in accordance with local, state, and federal requirements, considering the land use proposed. Excavation and earthworking activities associated with the proposed project shall not proceed until the Site Remediation Plan has been reviewed and approved by the regulatory oversight agency and is on file with the City.

- **COA 9.14:** Engineering fill brought on-site shall be demonstrated, by analytical testing, not to pose an unacceptable risk to human health or the environment. Threshold criteria for acceptance of engineered fill shall be selected based on screening levels and protocols developed by regulatory agencies for protection of human health and leaching to groundwater (e.g., Water Board ESLs). The engineered fill shall be characterized by representative sampling in accordance with U.S. EPA's SW-846 Test Methods, by a qualified environmental professional and demonstrated to meet the threshold criteria above. The results of the sampling and waste characterization shall be submitted by the contractor(s) to the City and SMCEHD prior to construction.

4.7.2 Impacts and Mitigation Measures

This section discusses potential impacts to hazardous materials that could result from implementation of the proposed project. The section begins with the criteria of significance, which establish the thresholds used to determine whether an impact is significant. The latter part of this section presents the impacts associated with the proposed project and identifies applicable COAs, as appropriate, to address these impacts.

4.7.2.1 Criteria of Significance

A significant hazardous material or public health and safety impact would occur if the proposed project would:

1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

5) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;

6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.7.2.2 Project Impacts

The following section describes the potential impacts of the project related to hazards and hazardous materials. Potential impacts are differentiated between the construction and operation phases of the project, where applicable.

1) Create a significant hazard due to routine transportation, use, or disposal of hazardous materials

The proposed project would result in demolition of the existing restaurant building and parking lots to develop a new building that would be used for a life science laboratory and office space. Hazardous materials (e.g., oil, grease, fuels, paint) would be transported, stored, and used onsite for proposed construction activities. The routine handling, storage, and use of hazardous materials by construction workers would be performed in accordance with OSHA regulations, which include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). Cal/OSHA regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. Compliance with these existing regulations would ensure that construction workers are protected from exposure to hazardous materials that may be used on site.

Because the proposed project would disturb soil on more than 1 acre of land, management of soil and hazardous materials during construction activities would be subject to the requirements of the State Water Board's Construction General Permit (described in detail under Section 3.10, Hydrology and Water Quality of the Initial Study included in Appendix B), which requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes hazardous materials storage protocols. For example, construction site operators must store chemicals in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed).

Construction of the proposed project would result in the generation of various waste materials that would require recycling and/or disposal, including some waste materials that may be classified as hazardous waste. Hazardous materials would be transported by a licensed hazardous waste hauler and disposed of at facilities that are permitted to accept such materials as required by the DOT, the RCRA, and State regulations.

In addition to the regulations discussed above, COA 2.17 requires appropriate storage, handling, and disposal procedures for hazardous materials during construction. Specifically, COA 2.17 requires the contractor(s) to designate storage areas suitable for material delivery, storage, and waste collection; all hazardous materials and wastes used or generated during project site development activities are to be labeled and stored in accordance with applicable local, State, and federal regulations; and an accurate up-to-date inventory of hazardous materials, including SDSs, is to be maintained on site to assist emergency response personnel in the event of a hazardous materials incident.

The operational phase of the proposed project may also include storage and use of hazardous materials (e.g., laboratory chemicals and wastes) on the project site. In addition, equipment installed at the project site, such as hydraulic elevator systems and backup generators, may involve the use and storage of hydraulic fluid, fuels, and other hazardous materials. The routine transport, use, or disposal of these hazardous materials could pose a potential hazard to future employees working at the project site as they would be handling the hazardous materials and could therefore be exposed through inhalation of vapors, direct contact with skin, or accidental ingestion. All future uses on the site would be subject to existing regulatory programs for hazardous materials. A Hazardous Materials Business Plan, in compliance with the Hazardous Materials Business Plan Program of SMCEHS, must be submitted to SMCEHS within 30 days of handling or storing a hazardous material equal to or greater than the minimum reportable quantities: 55 gallons for liquids, 500 pounds for solids and 200 cubic feet (at standard temperature and pressure) for compressed gases.

Compliance with existing regulations and COA 2.17, described above, would ensure that potential impacts from the routine transport, storage, use, or disposal of hazardous materials during construction and operation of the proposed project would be less than significant.

2) Create a significant hazard due to accidental release of hazardous materials

An accidental release of hazardous materials (e.g., oils, fuels, solvents, or paints) during project construction could result in exposure of construction workers, the public, and/or the environment to hazardous materials. As discussed above, the proposed project would be subject to the requirements of the Construction General Permit, which requires preparation and implementation of a SWPPP to reduce the risk of spills or leaks from reaching the environment, including procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as nonstructural best management practices (BMPs), as required by the Construction General Permit. For example, equipment and materials for cleanup of spills must be available on site, and spills and leaks must be cleaned up immediately and disposed of properly. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

As discussed above, the transportation of hazardous materials is subject to both RCRA and DOT regulations. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.

Based on the findings of a Phase I Environmental Site Assessment prepared for the project site, there is no known or suspected soil or groundwater contamination on the project site.[6] The proposed project would result in the demolition of the existing restaurant building and parking lots. As required by COA 3.1, a lead-based paint, hazardous building materials survey (polychlorinated biphenyls [PCBs], mercury), and asbestos survey (for those structures not previously surveyed) shall be performed by a qualified environmental professional prior to issuance of a demolition permit for structures located on the project site. Based on the findings of the survey, all loose and peeling lead-based paint and identified asbestos hazards shall be abated by a certified contractor in accordance with local, State, and federal requirements and requirements for worker health and safety. As required by COA 2.19, a Waste Disposal and Hazardous Materials Transportation Plan shall be prepared prior to construction activities where hazardous materials or materials requiring off-site disposal would be generated. COA 3.4 requires hazardous materials and wastes generated during demolition activities, such as fluorescent light tubes, mercury switches, lead-based paint, asbestos containing materials, PCB wastes, and subsurface hazardous building materials generated during grading and trenching activities, such as asbestos-cement piping, to be managed and disposed of in accordance with the applicable universal waste and hazardous waste regulations.

In addition, COA 2.17 requires the designation of storage areas suitable for material delivery, storage, and waste collection. COA 2.18 requires a CRMP to be prepared to protect construction workers, the general public, and the environment from subsurface hazardous materials previously identified in addition to unknown contamination or hazards potentially encountered in the subsurface. If subsurface contamination is encountered, COA 9.13 requires a Site Remediation Plan to be developed.

Compliance with existing regulations and COAs 2.17, 2.18, 2.19, 3.1, 3.4, and 9.13 would ensure that potential impacts from an accidental release of hazardous materials would be less than significant.

3) Emit hazardous materials within a quarter miles of a school

No schools were identified within 0.25 mile of the project site. The closest school to the project site is Futures Academy, about 1,400 feet (about 0.27 mile) southwest of the project site. The proposed project would not involve the handling of acutely hazardous materials. Compliance with existing regulations and COAs described under “Routine Transport, Use, and Disposal of Hazardous Materials” and “Accidental Release of Hazardous Materials” would prevent hazardous emissions during the construction of the proposed project, and would thereby prevent a significant risk of sensitive receptor exposure to hazardous materials, substances, or waste. Therefore, the risks associated with emissions of hazardous materials within 0.25 mile of a school would be considered less than significant.

[6] Haley & Aldrich, Inc., 2020. Draft Report on ASTM Phase I Environmental Site Assessment, 388 Vintage Park Drive, Foster City, California. October.

4) Create a significant hazard due to listing on a hazardous materials sites compiled pursuant to Government Code Section 65962.5

The project site is not included on any of the lists of hazardous materials release sites compiled pursuant to Government Code Section 65962.5, also known as the "Cortese List".[7] Therefore, the proposed project would not result in impacts related to being included on a list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5.

5) Result in a safety hazard or excessive noise due to proximity to an airport

The project site is 3.7 miles north of San Carlos Airport and approximately 5.5 miles southeast of San Francisco International Airport (SFO).[8] The project site is within Area A of the Airport Influence Area (AIA) Boundary of the San Carlos airport, where requirements for real estate disclosure are mandatory due to potential noise issues. Formal review of projects for potential obstruction issues is limited to Area B of the AIA, within a 9,000-foot radius of San Carlos Airport.[9] Because the project is not within AIA B of the San Carlos Airport, the project is not required to be reviewed for potential obstruction issues.

The project site is within Area B of the AIA Boundary of SFO, where the land development proposals shall be reviewed by the Airport Land Use Commission.[10] This would ensure the project would not include any land uses that would cause a hazard to air navigation within the vicinity of SFO.[11] In addition, the building heights for the proposed project (approximately 68 feet to the top of the parapet, and approximately 79 feet to the top of the penthouse) are well below the maximum height of 210 feet at which structures can be considered compatible with operations of the SFO;[12] therefore, the project would not be expected to interfere with aircraft and would not pose a hazard to persons occupying structures. Therefore, potential aviation hazards for the project would be less than significant.

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7 California Environmental Protection Agency. 2021. Cortese List Data Resources. Website: calepa.ca.gov/sitecleanup/corteselist (accessed July 19, 2021).

8 Federal Aviation Administration. 2021. Airport Data and Contact Information. Effective July 15, 2021. Database searched for both public-use and private-use facilities in San Mateo County. Website: http://www.faa.gov/airports/airport_safety/airportdata_5010/ (accessed July 19, 2021).

9 ESA. 2015. Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport, October. Website: http://ccag.ca.gov/plansreportslibrary/airport-land-use/ (accessed July 19, 2021).

10 City/County Association of Governments of San Mateo County. 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. November. Website: http://ccag.ca.gov/plansreportslibrary/airport-land-use/ (accessed July 19, 2021).

11 Land uses that could cause a hazard to air navigation within SFO AIA B include (1) sources of glare; (2) distracting lights that could be mistaken for airport identification lighting; (3) sources of dust, smoke, or water vapor; (4) sources of electrical interference; (5) sources of significant thermal plumes; and (6) any land use that would attract large concentrations of wildlife, particularly flocks of birds.

12 City/County Association of Governments of San Mateo County. 2012. Comprehensive Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport. November. Website: http://ccag.ca.gov/plansreportslibrary/airport-land-use/ (accessed July 19, 2021).

6) Impair implementation of or physically interfere with an emergency response or evacuation plan

Construction of the proposed project could require the temporary closure of portions of streets adjacent to the project site. Traffic control requirements imposed by the City for the permitting of temporary closure of street areas would ensure that appropriate emergency access is maintained at all times during construction activities. The proposed project would not permanently alter roadways in the vicinity of the project site. Therefore, the proposed project would have a less than significant impact related to impeding or interfering with emergency response or evacuation plans.

7) Exposure to wildland fires

The project site is within a highly urbanized area and is not near heavily vegetated areas or wildlands that could be susceptible to wildfire. The project site is in a Local Responsibility Area and is not identified as a Very High Fire Hazard Severity Zone as mapped by CAL FIRE. [13] Therefore, the proposed project would have a less than significant impact related to wildland fire hazards.

4.7.2.3 Cumulative Impacts

As discussed above, accidents involving hazardous materials releases or building materials that may be impacted with hazardous materials during construction activities could result in adverse effects to construction workers, the public, or the environment. Occurrence of a cumulative effect would require that multiple projects release hazardous materials at the same time close to one another. Compliance with existing regulations and COAs 2.17, 2.18, 2.19, 3.1, 3.4, and 9.13 would ensure that potential construction period impacts associated with releases of hazardous materials are less than significant. Each site, including the proposed project, would be required to comply with existing hazardous materials regulations to reduce the risk of impacts associated with hazardous materials releases. Therefore, the potential for impacts associated with hazardous materials releases from the proposed project to combine with impacts associated with hazardous materials releases from other sites is not cumulatively considerable.

[13] CAL FIRE. 2008. San Mateo County Very High Fire Hazard Severity Zones in LRA as recommended by CAL FIRE. November 24.

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4.8 PUBLIC SERVICES

This section analyzes and identifies the proposed project's potential impacts to public services, including fire and emergency medical services and polices services. Standard Conditions of Approval (COAs) and/or mitigation measures to reduce or avoid potentially significant air quality impacts are identified, where appropriate.

As described in the Initial Study prepared for the proposed project (included as Appendix B), the proposed project would have less than significant impacts related to schools, parks, recreation, and other public facilities, and therefore these topics are not further addressed in this EIR.

4.8.1 Setting

This section describes existing fire, emergency, and police services for the project site.

4.8.1.1 Fire Protection

In January of 2019, the fire departments of the cities of Belmont, Foster City, and San Mateo joined together as a Joint Powers Authority. This new fire department is known as the San Mateo Consolidated Fire Department (SMCFD) and provides fire suppression, prevention, life safety, and hazardous material response and containment services for Foster City, in addition to Belmont and San Mateo. SMCFD consists of nine fire stations strategically located throughout Foster City, Belmont, and San Mateo. SMCFD's staffing, facilities and equipment, and response times are described below.

Staffing. SMCFD currently has an authorized staff of 154 full-time employees and 3 part-time employees (or 157.01 full-time equivalent positions). Staff includes 84 firefighters, 39 captains, 7 battalion chiefs, 1 fire chief, 1 fire marshal, 1 deputy fire marshal, 3 fire inspectors, and 8 administrative staff.[1] Generally, each fire station in the SMCFD network has one fire engine staffed by one fire captain and two firefighters/engineers. Two stations have ladder trucks that staffed by one fire captain and three firefighter/engineers. One member of each engine company is a paramedic. Most of the firefighters have special skills including, but not limited to, rescue systems, confined space, swift water, and hazardous materials.[2] SMCFD staff also provide building and other development inspections.

Facilities and Equipment. The Foster City Fire Station 28 is at 1040 East Hillsdale Boulevard, 0.8 mile east of the project site. The station is continuously staffed by six firefighters and houses two fire engines and one water rescue boat. There are no currently planned improvements at this fire station, and there are no plans for the construction of new fire stations in the area.[3]

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1 Estero Municipal Improvement District (EMID). 2021. Final Budget, Fiscal Year 2021-2022. Website: https://www.fostercity.org/finance/page/annual-budget (accessed August 2021).

2 San Mateo Consolidated Fire Department (SMCFD). 2018. About Us. Website: https://www.smcfire.org/about-us (accessed August 2021).

3 SMCFD. 2020. San Mateo Consolidated Fire Department 2020 Annual Report. Website: www.smcfire.org/annual-reports (accessed August 2021).

Station 26 at 1500 Marina Court in San Mateo is the second closest station to the project site, approximately 1.5 miles to the southeast. The station is staffed by three firefighters and equipped with one fire engine.

Response Times. In 2020, the SMFCD responded to a total of 12,886 apparatus responses and various incidents.[4] The SMCFD's goal is to respond to 90 percent of all Priority 1 calls in under 7 minutes.[5] In 2020, the SMCFD's average response time in Foster City was approximately 5 minutes, 98 percent of the time.[6] In 2021, average response times to the area of the project site were approximately 4 minutes.

The SMCFD's current Insurance Service Office rating is Class 2 (1 being the highest and 10 being the lowest), upgraded from Class 3 in 2000. This rating considers a community's fire defense capacity versus its fire potential. The score is then used to set property insurance premiums for homeowners and commercial property owners.

4.8.1.2 Police Protection

The City of Foster City Police Department (FCPD) is at 1030 East Hillsdale Boulevard, adjacent to Fire Station 28, approximately 0.8 mile east of the project site. The FCPD has an authorized staff of 54, including 39 sworn officers.[7] Citywide, one supervisor and three to five officers are working at any given time.

Based on an estimated population of 33,901 in 2019,[8] the year for which the most current data is available, the current police officer-to-resident ratio is 0.6 sworn officers per 1,000 residents, which is below the City's target police officer-to-resident ratio of 1 to 1.5 sworn officers per 1,000 residents, the industry standard. This standard does not take daytime, non-resident populations into account. Generally, municipalities with land uses that significantly increase such populations, such as universities or large business parks, use the standard as a baseline and add officers as needed to serve those additional populations. The FCPD has not identified a standard that considers non-residents.

In 2020, the FCPD responded to 17,451 calls for service.[9] As of 2019, the most recent year for which the data are available, the average response time for non-emergency calls in Foster City was 7 minutes and 30 seconds. For emergency calls throughout the city, the average response time was 4

4 EMID. 2021. Final Budget, Fiscal Year 2021–2022. Website: https://www.fostercity.org/finance/page/annual-budget (accessed August 2021).

5 SMCFD. 2018. Field Operations. Website: https://www.smcfire.org/field-operations (accessed August 2021).

6 EMID. 2021. Final Budget, Fiscal Year 2021–2022. Website: www.fostercity.org/finance/page/annual-budget (accessed August 2021).

7 Ibid.

8 United States Census Bureau. 2019. QuickFacts. Available online at: https://www.census.gov/quickfacts/fact/table/fostercitycitycalifornia,US/PST045219 (accessed August 2021).

9 EMID. 2021. Final Budget, Fiscal Year 2021–2022. Website: www.fostercity.org/finance/page/annual-budget (accessed August 2021).

minutes and 58 seconds. The average response times for both non-emergency and emergency calls to the project site was the same as citywide averages.

4.8.1.3 Regulatory Setting

The following sections describes the regulatory setting for public services in Foster City, including the Foster City General Plan and COAs.

Foster City General Plan. The Foster City General Plan includes the following goals, policies, and programs that are related to fire and police services that would apply to the proposed project.

- **Goal LUC-F: Provide Adequate Services and Facilities.** Ensure that new and existing developments can be adequately served by municipal services and facilities.

- **Policy LUC-L-10: Adequacy of Public Infrastructure and Services.** New projects which require construction or expansion of public improvements shall pay their pro rata fair share of the costs necessary to improve or expand infrastructure necessary to serve them, including streets and street improvements, parks, water storage tanks, sewer and water service, and other public services. The City has established several assessment districts to pay for needed municipal improvements. Facilities benefiting a specific development must be provided by the developer of that project.

- **Policy S-C-4: Minimize Loss of Life, Injuries, and Property Damage Due to Fires.** The City will minimize loss of life injuries, and property damage due to fires through review of development proposals, public education, and maintenance of well-trained fire suppression personnel.

- **Program S-C-4-a: Development Review for Fire Safety.** The City will review proposals for new and modified buildings to ensure that fire safety provisions are included as required by the most current uniform codes and local regulations.

- **Program S-D-4-b: Development Review for Crime Prevention.** The City will review proposals for new and modified buildings for compliance with crime prevention requirements.

- **Policy S-E-2: Police Services.** The City will provide police services necessary to maintain community order and public safety.

- **Program S-E-1-a: Police Services.** The City will provide adequate personnel, training, and equipment to support the provision of police services.

Foster City Standard Conditions of Approval. The following COAs related to police and fire services would apply to the proposed project.

- **COA 5.10.3:** Water lines shall be designed for fire flows to meet California Fire Code and Fire Department requirements.

- **COA 5.10.4:** All on-site fire water service mains shall have two sources of supply connections to City/District water system, be looped and meet the requirements of the State Department of Health Services and the City Fire Marshal.

- **COA 5.10.6:** Prior to the issuance of a building permit, fire mains shall be designed to Fire Department specifications. Fire mains shall be constructed according to those specifications.

- **COA 6.12:** Prior to issuance of the architectural/structural shell, all emergency vehicle access and location of building numbers shall be identified to the satisfaction of the City.

- **COA 10.5.1:** Floor plans shall be provided in PDF format to the Fire and Police Departments.

- **COA 10.19:** Prior to occupancy the developer shall submit a letter to the Foster City Police Department verifying that the proposed project complies with all applicable requirements of Chapter 15.28, Burglar Security Ordinance, of the Foster City Municipal Code.

- **COA 10.20:** Prior to occupancy, in all commercial properties, apartment complexes or condominium complexes, the non-secure parking areas shall be equipped with a video surveillance system.

- **COA 10.21:** Prior to occupancy, residential and commercial property owners shall register their alarm systems/video surveillance systems with the Police Department.

- **COA 10.25:** Prior to building occupancy, all loading zones, fire lanes and restricted parking zones shall be marked in accordance with the California Vehicle Code and the Foster City Municipal Code, except that all ADA accessible parking spaces shall be marked with all three of three required methods (vertical sign, blue striping/wheel stop and pavement emblem marking). All areas not designated as parking stalls shall be marked as a "FIRE LANE" per Section 22500.1 CVC.

4.8.2 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to fire and police service that could result from implementation of the proposed project. The section begins with the significance criteria, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and the recommended mitigation measures or COAs, if required.

4.8.2.1 Significance Criteria

Development of the proposed project would result in a significant impact related to fire and police services if it would:

1) Result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection.

2) Result in substantial adverse physical impacts associated with the provision of, or need for, new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.

4.8.2.2 Project Impacts

The following describes the potential impacts related to fire and police services that could result from implementation of the proposed project.

1) Require new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts

As noted by the SMCFD, the average response time to the area of the project site is approximately 4 minutes. The existing building on the project site is currently vacant; therefore, development of the proposed project, which would introduce a new primarily daytime population to the site consisting of approximately 213 new employees, could result in an incremental increase in demand for fire protection and associated emergency services. Based on the SMFCD's 2020 calls for service of 12,886 and the total service area population of approximately 261,510, which consists of both residents (approximately 166,000[10]) and employees (approximately 95,510[11]) working within the service area, this could result in approximate increase of 11 new annual calls to the site (a 0.08 percent increase compared to existing call volume).[12] This represents a minor increase in the overall calls for service expected for the project area with implementation of the proposed project. In addition, the project site is in a highly developed urban area 0.8 miles from Fire Station 28 and 1.5 miles from Fire Station 26. Both of these engine companies currently serve the project area and have sufficient staffing and capacity to continue serving the site without reducing average response times to the site or vicinity. Therefore, the proposed project would not require the provision of, or the need for, new or physically altered facilities to continue to serve the project site at the current level, nor would the proposed project impact the SMCFD's current response times. The SMCFD has indicated that development of the proposed project would not require additional staffing to maintain service levels at the project site or throughout the city, and that the proposed project would not present any unique challenges that would require new facilities or personnel.[13] Therefore, the SMCFD currently has sufficient numbers and types of engines, equipment, and non-personnel resources to adequately serve the proposed project.

The proposed project would also be required to meet all applicable fire code regulations as set forth in Chapter 15.24 of the municipal code and comply with all applicable COAs related to fire services

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10 San Mateo Consolidated Fire Department. *Adopted 2020–22 Business Plan*. Website: https://www.smcfire.org/administration (accessed August 2021).

11 Association of Bay Area Governments and Metropolitan Transportation Commission. 2017. Plan Bay Area 2040. Projections 2040. Website: http://projections.planbayarea.org/ (accessed August 2021).

12 12,886 calls / 261,510 service population = 0.05 calls per resident/employee. 213 employees * 0.05 calls per resident/employee = 10.65 new calls.

13 San Mateo Consolidated Fire Department. Orque, Michele, Fire Inspector. September 13, 2021. Personal communication with Sofia Mangalam, Planning Manager, City of Foster City.

and emergency access, as identified in Section 4.8.1.3. The City has adopted, with some modifications by City Ordinance, the California Fire Code (CFC). SMFCD staff would review the proposed project for compliance with applicable fire and building codes, including emergency access regulations. Therefore, with compliance with the CFC, as amended, the proposed project would result in a less than significant impact related to fire protection.

2) Require new or physically altered police protection facilities, the construction of which could cause significant environmental impacts

As previously discussed, in 2020, the FCPD responded to 17,451 calls for service,[14] and served a resident/employee population of 57,601 during that same year (or approximately 0.3 calls per resident/employee, on average). The proposed project would create 213 new full-time jobs within the city, as described in Section 3, Project Description. Therefore, the proposed project would result in an incremental (0.4 percent) increase in demand for police services at the project site and the surrounding area, which would represent a minor increase in existing calls for service.[15] Although implementation of the proposed project may result in an incremental increase in demand for police services, the FCPD has indicated that this increase would not result in the need for new police facilities or staffing.[16]As noted previously, there is no industry-wide standard to determine the ratio of police officers needed to serve a non-resident, primarily daytime population. As indicated above, the current ratio of sworn officers to Foster City residents is 0.6 officers per 1,000 residents, below the City's goal of 1 to 1.5 officers per 1,000 residents. Based on an estimated population of 33,901 in 2019 and an existing staff of 39 sworn personnel, approximately 11 new sworn officers (50 sworn personnel total) are needed to bring staffing levels to a ratio of 1.5 officers per 1,000 residents. As described in the Initial Study prepared for the proposed project (included in Appendix B), approximately 17 new Foster City residents would be generated as a result of the project.[17] This addition of new residents from the project would require less than 1 additional sworn officer to serve the new development within FCPD's desired staffing ratio.

Police services and staffing ratios are reviewed through an annual budgeting process during which citywide priorities are established and service levels monitored, allowing adjustments where needed. Any added personnel would be funded through the City's General Fund. Revenue and taxes generated by the project would contribute to the City's General Fund for such purposes as funding added personnel. Additional officers needed to meet FCPD's desired staffing level would be accommodated by existing facilities.[18] However, staffing levels do not relate to physical impacts and thus are not considered an impact under CEQA. This analysis is therefore provided for informational

[14] EMID. 2021. Final Budget, Fiscal Year 2021–2022. Website: www.fostercity.org/finance/page/annual-budget (accessed August 2021).

[15] 213 employees * 0.3 calls per resident/employee = 64 new calls.

[16] Foster City Police Department. Terry, Marcus, Crime Prevention and Community Outreach Corporal. November 9, 2021. Personal communication with Sofia Mangalam, Planning Manager, City of Foster City.

[17] In 2018, the year for which the most recent data are available, an estimated 7.9 percent of the people employed in Foster City also lived within the city, whereas the other 92.1 percent lived elsewhere in the Bay Area. Consistent with this ratio, the proposed project would result in approximately 17 employees who could live in Foster City.

[18] Terry, Marcus. op. cit.

purposes only. Development of the project would not affect the FCPD's ability to meet this response time goal, nor would it require the provision of or need for new or physically altered facilities to continue to serve the project site. In addition, the proposed project would be required to comply with all applicable COAs related to police protection services, as identified in Section 4.8.1.3. The project would therefore have a less-than-significant impact on police protection services.

4.8.2.3 Cumulative Impacts

The proposed project and cumulative projects would incrementally increase the demand for fire and police services. These services are subject to an annual budgeting process during which service priorities are established and service levels are monitored, allowing for adjustments where needed. Changes in demand for these services are expected to be incremental, allowing for carefully planned expansions of existing facilities. Any expansions would be likely to take place on sites already occupied by existing service providers. Additionally, for any expansions of new facilities, or development projects that require the expansion of existing or new facilities, project-specific CEQA review would be required, which would ensure that any potential impacts related to the expansion or construction of facilities would be less than significant. Therefore, no cumulative impacts to these services are anticipated that would result in adverse physical impacts associated with the maintenance of service standards.

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4.9 UTILITIES AND SERVICE SYSTEMS

This section describes the utility systems (water, wastewater, solid waste, energy, and telecommunications) serving the project site and identifies the potential impacts to utility services and infrastructure that could result from implementation of the proposed project. Standard conditions of approval and/or mitigation measures to reduce or avoid potentially significant air quality impacts are identified, where appropriate. Impacts to the stormwater system are also more fully discussed in Section 3.9, Hydrology and Water Quality, of the Initial Study prepared for the proposed project (included as Appendix B). These impacts were determined to be less than significant.

4.9.1 Setting

This section addresses the following utilities: water supply, treatment, and distribution; wastewater collection, treatment, and disposal; solid waste; energy; and telecommunications.

4.9.1.1 Water Service

The Estero Municipal Improvement District (EMID) manages the distribution, operation, and maintenance of the City's water supply system. Unless otherwise noted, the information presented below is based on the Water Supply Assessment (WSA) prepared for the proposed project, which is included as Appendix F.[1] The WSA relies, in part, on the 2020 Urban Water Management Plan (UWMP) the City of Foster City (City) prepared and adopted in July 2021.[2]

Water Sources. The EMID, which also serves San Mateo's Mariners Island area, is governed by the City and managed and operated by the City's Public Works Department. The EMID serves a population of 36,516, which is largely made up of residential uses, but also contains commercial uses and a small number of industrial businesses. EMID purchases all of its potable water from the San Francisco Public Utilities Commission's (SFPUC) Regional Water System (RWS) and is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA). Water distribution and conservation and water quality maintenance are EMID main water resources functions, as treated water purchased from the SFPUC RWS does not require further water treatment.

The city is almost built out, with several development projects in various stages of planning and construction. Table 4.9.A, below, shows the projected service area population and employment growth in 5-year increments until 2045.

Approximately 85 percent of the water supply to the SFPUC RWS originates in the Hetch Hetchy watershed, located in Yosemite National Park, and flows down the Tuolumne River into the Hetch Hetchy Reservoir. Water from the Hetch Hetchy watershed is managed through the Hetch Hetchy Water and Power Project. The remaining 15 percent of water supply to the SFPUC RWS originates locally in the Alameda and Peninsula watersheds and is stored in six different reservoirs in Alameda and San Mateo Counties. The EMID does not have any groundwater or recycled water sources to supplement its supply.

1 HydroScience. 2021a. *388 Vintage Park Drive, Foster City – Water Supply Assessment.* August 4.
2 Foster City, City of. 2021c. 2020 Urban Water Management Plan. June.

Table 4.9.A: EMID Projected Population and Employment

	2020	2025	2030	2035	2040	2045
Service Area Population	36,516	36,932	37,602	38,848	40,107	41,366
Percent Population Increase	--	1.14	1.81	3.31	3.24	3.14
Service Area Employment	30,122	33,938	38,855	41,137	43,434	45,731
Percent Employment Increase	--	12.66	14.49	5.87	5.58	5.29

Source: HydroScience (2021a).
EMID = Estero Municipal Improvement District

The EMID does not hold any existing water rights; rather its water supply assurances are the result of its contract with the SFPUC. In August 2009, the BAWSCA and its member agencies signed a new Water Supply Agreement and Individual Water Sales Contract with SFPUC. The contract runs through June 30, 2034 and guarantees a supply assurance of 184 million gallons per day (mgd) to BAWSCA member agencies. The supply assurance to the EMID is 5.9 mgd or 2,154 million gallons per year (mgy). The portion of that supply assurance to EMID and the projected water demand through 2045 is shown in Table 4.9.B. Although the Master Agreement and accompanying Water Supply Contract expire in 2034, the Supply Assurance (which quantifies San Francisco's obligation to supply water to its individual wholesale customers) survives their expiration and continues indefinitely.

Table 4.9.B: EMID Water Demand and Supplies

Description	2025	2030	2035	2040	2045
Total Water Supply (mgy)	2,154	2,154	2,154	2,154	2,154
Total Water Demand (mgy)	1,615	1,646	1,681	1,723	1,805
Surplus (Shortfall)	539	508	473	431	349

Source: HydroScience (2021).
EMID = Estero Municipal Improvement District

As shown in Table 4.9.B, EMID water demand is, and will remain, significantly lower than its SFPUC assured supply. The Supply Assurance is subject to reductions in the event of drought, water shortage, earthquake, or rehabilitation/maintenance of the system. Table 4.9.C shows SFPUC's projected deliveries to EMID for a single dry year and for an additional four consecutive dry years, based on the allocation of 2,154 mgy.

4.9.1.2 Water Treatment, Distribution, and Storage Facilities

As discussed above, the majority of the SFPUC's water supply originates in the upper elevations of the Sierra Nevada, in the Tuolumne watershed. The SFPUC treats its water to meet all drinking water standards, and the EMID receives the already treated water from the SFPUC and distributes it to its customers. As a retailer, the EMID has no direct control over its water supply and treatment. The EMID has only one main source of water supply, a 24-inch transmission main that connects to the SFPUC's 54-inch Crystal Springs No. 2 line. The connection point is in San Mateo, on Crystal Springs Road.

Table 4.9.C: EMID Water Demand and Supplies in Single and Consecutive Dry Years

Description	Normal Year	Single Year/ Year 1	Year 2	Year 3	Year 5	Year 5
Total Water Supply (mgy)	2,154	1,635	1,646	873	873	873
Total Water Demand (mgy)	Varies	1,595	1,600	1,607	1,614	1,615
Surplus (Shortfall)	Varies	40	46	(734)	(741)	(742)

Source: HydroScience (2021).
EMID = Estero Municipal Improvement District

In addition to the 24-inch transmission main, the EMID has two separate 12-inch emergency supply connections with the California Water Service Company (which serves the city of San Mateo) and with the Mid-Peninsula Water Agency (formerly called Belmont County Water District, which serves the cities of Belmont, San Carlos, and part of Redwood City). The EMID has agreements with both agencies that allow the EMID to use these connections during emergency situations. Both the California Water Service Company and the Mid-Peninsula Water Agency are members of the BAWSCA.

The EMID has four at-grade water storage tanks with a total capacity of 20 million gallons for emergencies and peak and fire flow demand. Booster pumps are necessary to pump water from the storage tanks into the distribution system. The booster pump station has two electrical pumps and four engine-driven pumps. The engine-driven pumps are powered by natural gas with propane backup.

EMID's wholesaler, SFPUC, has been implementing its Water System Improvement Plan (WSIP) since it was adopted in 2008. The WSIP includes several water supply projects to address the Level of Service Goals and Objective established in the WSIP and updated in February 2020. SFPUC has also developed an Alternative Water Supply Planning program to explore other projects that would increase overall water supply resiliency. Through this program, the SFPUC will conduct feasibility studies and develop an Alternative Water Supply Plan by July 2023 to support the continued development of water supplies to meet future needs.

4.9.1.3 Wastewater (Sanitary Sewer) System

The wastewater collection and treatment system serving the project site is owned by the EMID and operated by the Sewer Division of the Foster City Public Works Department. The existing collection system and wastewater treatment facilities serving the City and the project site are described below.

Collection System. The Wastewater Division of the City's Public Works Department operates and maintains more than 43 miles of sanitary sewer lines, more than 8.5 miles of sewer force mains, 49 pumping stations, 15 permanent standby generators, and 4 portable generators to ensure that the approximately 3 million gallons of wastewater that Foster City homes and businesses generate each day is pumped to the jointly-owned San Mateo Treatment facility in San Mateo. Wastewater is transported via a collection of mains and lift stations from the project site directly to the San Mateo

Regional Water Quality Control Plant, where it is reclaimed and then discharged into the San Francisco Bay. The system is maintained and upgraded on an as-needed basis.

Wastewater Treatment Facilities. Wastewater treatment is provided by the San Mateo Wastewater Treatment Plant (WWTP), which is jointly owned by the EMID and the City of San Mateo and serves over 130,000 people and businesses. The EMID owns approximately 25 percent of the treatment plant. The treatment plant has an average daily dry-weather flow capacity of 15.7 mgd, of which 4.3 mgd is the purchased capacity for EMID per the Joint Powers Agreement.[3] The WWTP has an actual average daily dry-weather flow of 12.3 mgd. EMID's actual average daily flow is approximately 3.1 mgd, or 1.2 mgd below capacity.[4] Based on current flow data, average daily dry-weather flows EMID produces are below the capacities anticipated in the Joint Powers Agreement.

The WWTP can treat up to 60 mgd through primary treatment (using gravity to remove solid waste) and 40 mgd through secondary treatment (using biological processes to remove dissolved waste). During heavy rains this capacity is regularly exceeded, causing sewers to overflow. In addition, the WWTP is an aging wastewater collection system, with facilities and components that are up to 75 years old. To address these issues, the City of San Mateo's Clean Water Program is upgrading and expanding the WWTP facilities in collaboration with the City of Foster City/EMID. The WWTP upgrades will accommodate heavy storm events up to 78 mgd. Construction was initiated in August 2019 with an anticipated date of completion in 2024.

4.9.1.4 Storm Drainage System

The existing stormwater from the project site either infiltrates through the surface soils within the landscaped areas of the project site, or runs off the impervious surfaces into the adjacent streets where it collects in the City's storm drainage system and discharges into the Foster City Lagoon system. Stormwater that enters Foster City Lagoon flows by gravity to, or is pumped into, San Francisco Bay.

4.9.1.5 Solid Waste

The following section describes the City's non-hazardous and hazardous waste disposal services and capacity.

Non-Hazardous Solid Waste. The City is a member agency of the South Bayside Waste Management Authority (SBWMA), also known as RethinkWaste, a joint powers authority created in 1982 to facilitate waste management programs for its member agencies. The SBWMA contracts with Recology San Mateo County, a private service, to provide recycling, compost, and garbage collection services for residents and businesses in the SBWMA service area. Non-hazardous solid waste and recyclables are taken to the Shoreway Environmental Center (Shoreway) on the border of the cities of San Carlos and Redwood City. Shoreway's facilities include a Transfer Station operated by South Bay Recycling and a Public Recycling Center.

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3 Foster City, City of. 2016a. *Foster City General Plan*. November.

4 San Mateo, City of. 2019. Clean Water Program. Website: https://cleanwaterprogramsanmateo.org/wwtp/?fbclid=IwAR20hW7e4gikVJFk3OL-qD85N0BE2DDq9Qy0bC38dPLzg8ymrLHnogef-Ow (accessed August 2021).

Since 2010, the facility has been permitted to receive 3,000 tons per day of solid waste and recyclables, with permit review required every 5 years. In addition, Shoreway is designed to receive up to 4,100 tons per day.[5] In 2020, the facility received a daily average of 538 tons of trash, 302 tons of green waste, 200 tons of recyclables, and 108 tons of bulky items, or approximately 1,148 tons of waste per day.[6,7] After undergoing processing, waste from Shoreway is delivered to the Corinda Los Trancos (Ox Mountain) Landfill in Half Moon Bay. The landfill handles construction, demolition, and mixed municipal waste. The landfill has a permitted throughput of 3,598 tons per day and an estimated "cease operation date" of January 1, 2034. As of December 31, 2015, the most recent year for which data are available, the estimated remaining capacity was 22.18 million cubic yards, or 36 percent of the original total.[8]

Hazardous Solid Waste. Foster City's hazardous wastes are disposed of at the Kettleman Hills Facility, Landfill B-18, which is operated by Chemical Waste Management, Inc. The Kettleman Hills Facility is in the San Joaquin Valley, about 2.5 miles west of Interstate 5, approximately midway between San Francisco and Los Angeles. The facility is approved under the Comprehensive Environmental Response, Compensation, and Liability Act and permitted under the Toxic Substances Control Act and the Resource Conservation and Recovery Act to manage hazardous waste materials. The Kettleman Hills Landfill B-18 encompasses 695 acres and has a total capacity of 15.7 million cubic yards. The California Department of Toxic Substances Control has not identified a closure date, however, Chemical Waste Management Inc. is currently pursuing a permit renewal.[9] According to the California Department of Resources Recycling and Recovery (CalRecycle), no closure date has been identified for the landfill.

4.9.1.6 Electricity and Gas

The Pacific Gas & Electric Company (PG&E) provides electrical and natural gas service to customers in Foster City. PG&E charges connection and user fees for all new development in addition to sliding rates for electrical and natural gas service based on use. Electrical services are currently available at the project site. Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, details requirements to achieve minimum energy efficiency standards of the State of California. The standards regulate energy consumed by new residential and non-residential building construction for heating, cooling, ventilation, water heating, and lighting. The local building permit process verifies and enforces compliance with these standards.

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5 South Bay Recycling and South Bayside Waste Management Authority. 2020. Application for Solid Waste Facility Permit and Waste Discharge Requirements. SWIS Number 41-AA-0016. May 15.

6 South Bayside Waste Management Authority. *Rethink Waste 2020 Annual Report*. Website: https://rethinkwaste.org/about/rethinkwaste/annual-reports-budgets/ (accessed August 2021).

7 Due to the ongoing COVID-19 pandemic, the Shoreway Environmental Center handled approximately 12 percent less waste in total compared to 2019.

8 California Department of Resources Recycling and Recovery. 2019. SWIS Facility/Site Activity Details. Corinda Los Trancos Landfill (Ox Mtn) (41-AA-0002). Website: https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223 (accessed August 2021).

9 California Department of Toxic Substances Control. 2021. Chemical Waste Management Inc. Kettleman (CAT000646117). Website: https://www.envirostor.dtsc.ca.gov/public/hwmp_profile_report.asp?global_id=CAT000646117 (accessed August 2021).

4.9.1.7 Telecommunications

Multiple telecommunications providers serve Foster City. AT&T is the City's primary telephone provider (or Incumbent Local Exchange Carrier – ILEC). Other carriers such as Qwest, Williams Communications, MCI/Worldcom, and Sprint have started providing services to commercial accounts in Foster City. Other providers offer DSL-type services to the residential market, but most are reliant upon AT&T's infrastructure. The City has a non-exclusive Franchise Agreement with the Comcast Corporation, which is currently the sole cable television and broadband internet provider. The City regulates Comcast services as provided under federal law. These service providers are privately owned and operated, and recover the costs of operation, maintenance, and capital improvement through connection and user fees collected from all customers. These services are currently available at the project site.

The California Public Utilities Commission (CPUC) regulates California's telecommunications industry and requires that local phone service providers anticipate and serve new growth. To meet this requirement, local providers continually upgrade their facilities, technology, and infrastructure to remain in conformance with California Public Utilities Commission tariffs and regulations and to serve customer demand in the City.

4.9.1.8 Regulatory Framework

The following section describes the regulatory context for utilities and service systems in Foster City, including statewide mandates and local General Plan policies and applicable standard Conditions of Approval (COA).

California Integrated Waste Management Act (Assembly Bill 939). In 1989, the California Legislature enacted the California Integrated Waste Management Act (Assembly Bill [AB] 939), which requires the diversion of waste materials from landfills to preserve landfill capacity and natural resources. Cities and counties in California were required to divert 25 percent of solid waste by 1995, and 50 percent of solid waste by 2000. AB 939 further requires every city and county to prepare two documents demonstrating how the mandated rates of diversion will be achieved. The Source Reduction and Recycling Element must describe the chief source of the jurisdiction's waste, the existing diversion programs, and current rates of waste diversion and new or expanded diversion programs. The Household Hazardous Waste Element must describe each jurisdiction's responsibility in ensuring that household hazardous wastes are not mixed with non-hazardous solid wastes and subsequently deposited at a landfill.

California Code of Regulations. Title 24: California Building Standards Code. Title 24, California's Energy Efficiency Standards for Residential and Non-Residential Buildings, requires construction of new buildings and additions to adhere to energy-efficiency standards. These standards include targets for energy efficiency, water consumption, dual-plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and the use of environmentally-sensitive materials in construction and design. The City follows the most current State business codes. The City's General Plan Conservation Element, Program C-0, requires new construction to be built according to Title 24.

Urban Water Management Planning Act. In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act requires that every

urban water supplier that provides water to 3,000 or more customers or that provides more than 3,000 acre-feet per year (AFY) prepare and adopt a UWMP. Water suppliers are to prepare a UWMP within 1 year of becoming an urban water supplier and update the plan at least once every 5 years. The act also specifies the content that is to be included in an UWMP. It is the intention of the legislature to permit levels of water management planning commensurate with the number of customers served and the volume of water supplied. The act states that urban water suppliers should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act also states that the management of urban water demands and the efficient use of water shall be actively pursued to protect both the people of the state and their water resources. The City recently adopted the 2020 Urban Water Management Plan, which is further discussed below.[10] The 2020 UWMP is a projection of demands and supplies for 25 years through 2045.

Senate Bills 610 and 221. In 2003, Senate Bill (SB) 610 and SB 221 were signed into law by Governor Gray Davis. SB 610 requires public water systems that supply water to proposed projects to determine whether the projected water demand (associated with the proposed project) could be met when existing and planned future uses are considered. For the purposes of SB 610, Water Code Section 10912 (a)(2) requires all projects with a water demand equivalent to 500 or more dwelling units, or which include over 250,000 square feet of commercial office building, to obtain a WSA. In addition, SB 610 requires a quantification of water received by the water provider in prior years from water rights, water supply entitlements, and water service contracts. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

The Water Conservation Act of 2009 (Senate Bill x7-7). Senate Bill x7-7 (SBx7-7) requires all water suppliers to increase water use efficiency. SBx7-7 mandates the reduction of per capita water use and agricultural water use throughout the State by 20 percent by 2020.

California Public Utilities Commission. The CPUC regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. General Order 121-d gives the CPUC permitting authority over construction of new and expanded power plants, electric transmission lines, and substations. Pursuant to CEQA, an environmental analysis must be conducted before issuance of construction permits by CPUC. CPUC Decision 95-08-038 contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. The CPUC also regulates local natural gas distribution facilities and services, as well as interstate pipelines.

California Energy Commission. The California Energy Commission (CEC) is the State's primary energy policy and planning agency. The CEC was created by the Legislature in 1974 and is responsible for forecasting future energy needs and keeping historical energy data; licensing thermal power plants 50 megawatts or larger; promoting energy efficiency by setting the State's appliance and building efficiency standards; supporting public interest energy research that advances energy science and technology; supporting renewable energy by providing market support to existing, new, and

[10] City of Foster City. 2021. Public Review Draft 2020 Urban Water Management Plan. June.

emerging renewable technologies; developing and implementing the State Alternative and Renewable Fuel and Vehicle Technology Program to reduce the State's petroleum dependency and help attain the State climate change policies; administering more than $300 million in American Reinvestment and Recovery Act funding through State programs; and planning for and directing the State response to energy emergencies.

Foster City General Plan. The Foster City General Plan includes the following goals, policies, and programs that are related to utilities and service systems.

- **Goal LUC-F: Provide Adequate Services and Facilities.** Ensure that new and existing developments can be adequately served by municipal services and facilities.

- **Policy LUC-L-10: Adequacy of Public Infrastructure and Services.** New projects which require construction or expansion of public improvements shall pay their pro rata fair share of the costs necessary to improve or expand infrastructure necessary to serve them, including streets and street improvements, parks, water storage tanks, sewer and water service, and other public services. The City has established several assessment districts to pay for needed municipal improvements. Facilities benefiting a specific development must be provided by the developer of that project.

- **Policy C-1: Water Resources.** Conserve water resources in existing and new development.

- **Policy C-5: Solid Waste.** Reduce the generation of solid waste through recycling and other methods.

- **Program C-a: Water Saving Landscaping and Irrigation.** Promote the use of low-water-use landscaping and irrigation devices in parks, and during review of new projects and modifications to existing developments.

- **Program C-b: Property Owner Water Saving Techniques.** Encourage all property owners to implement the following conservation techniques: utilize drought tolerant plant materials, limit turf areas to 25 percent of landscaping, limit hours of the day for watering, retrofit with water-conserving fixtures, retrofit existing bathrooms and install new bathrooms with ultra-low-flow toilets and water conserving shower heads.

- **Program C-o: Title 24.** Construct new buildings and additions to energy efficiency standards according to Title 24 of the California State Model Code.

- **Program C-p: Solar Heating and Cooling.** Encourage installation of solar panels for heating and cooling with solar energy.

- **Program C-t: Source Reduction and Recycling Element.** Implement the Source Reduction and Recycling Element in accordance with State regulations.

- **Policy S-A-3: Water Supply.** The City will provide an adequate supply of water for daily use and emergency situations.

- **Program S-A-3-a: Water Supply and Delivery.** The City will maintain a water supply and delivery system that can meet potential fire-fighting demands through annual exercising of fire hydrants and periodic review of storage needs.

Foster City Standard Conditions of Approval. The City has adopted standard COAs for large new and redevelopment projects. The following COAs related to utilities and service systems would apply to the proposed project.

- **COA 2.4:** Prior to issuance of a building permit, the Construction Best Management Practices (BMPs) from the San Mateo Countywide Stormwater Pollution Prevention Program shall be included as notes on the building permit drawings.

- **COA 2.9:** The construction contractor shall designate a "noise disturbance coordinator" who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaints (e.g., beginning work too early, bad muffler) and institute reasonable measures warranted to correct the problem. A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site. The construction contractor shall protect all downstream sanitary sewer lines from construction debris while performing sanitary sewer construction. Means to prevent construction debris must be used and shall be inspected by the construction inspector.

- **COA 5.8.1:** The applicant shall have a registered civil engineer prepare a sewer flow projection study and a hydraulic capacity study, to be submitted to the Engineering Division for review. The study shall meet the approval of the Engineering Division and should:

    - Verify that the existing sewer system is properly sized to meet the projected increase in wastewater generation on the project site.

    - Study the on and off-site sewer system (including lift stations) which services the project (both upstream and downstream).

    - Show the new connecting points to the existing sewers and model the estimated flows and peaking factors, as they relate to the changes in land use for the proposed project.

    No on-site or downstream overloading of existing sewer system will be permitted. Any necessary improvements identified by the study shall be constructed by the developer/applicant at applicant's sole cost.

- **COA 5.9.1:** Prior to issuance of a building permit, the improvement plans shall include the design of stormwater improvements in accordance with the City's Standard Details/Specifications and to the satisfaction of the Engineering Division. Stormwater improvements items of construction should include at least the following:

    - Surface and subsurface storm drain facilities;
    - Manholes with manhole frames and covers;
    - Catch basins and laterals;

- Construct all catch basins as silt detention basins; and
- Together with appurtenances, to any or all of the above.

- **COA 5.9.2:** Prior to issuance of a building permit, a complete storm drainage study of the proposed development shall be prepared by a registered civil engineer and submitted as part of the improvement plans package. Drainage facilities shall be designed in accordance with accepted engineering principles and be approved by the Engineering Division. The hydrology/hydraulic analysis shall include the following:

  - The amount of runoff, and existing and proposed drainage structure capacities.
  - Verification that the existing storm drain system is adequately sized to handle the run-off from the project.
  - Conformance with the City's Drainage Design Criteria/Standards available on the City's website: https://www.fostercity.org/publicworks/page/city-standard-design-criteria
  - Calculations and plans showing hydraulic gradelines.
  - Evidence that the system is capable of handling a 25-year storm with the hydraulic grade line at least one foot below every grate.

  No overloading of the existing system will be permitted. All needed improvements shall be installed by the applicants at applicants' sole cost.

- **COA 5.9.3:** The applicant shall fully comply with the C.3 provisions of the Municipal Regional Stormwater NPDES Permit (MRP). Responsibilities include, but are not limited to, designing Best Management Practices (BMPs) into the project features and operation to reduce potential impacts to surface water quality associated with operation of the project. These features shall be included in the design-level drainage plan and final development drawings. Specifically, the final design shall include measures designed to mitigate potential water quality degradation of runoff from all portions of the completed development.

  All Stormwater control measures outlined in the current San Mateo Countywide Water Pollution Prevention Program's C.3 Stormwater Technical Guidance manual shall be incorporated into the project design. Low Impact Development features, including rainwater harvesting and reuse, and passive, low-maintenance BMPs (e.g., grassy swales, porous pavements) are required under the MRP. Higher-maintenance BMP's may only be used if the development of at-grade treatment systems is not possible, or would not adequately treat runoff. Funding for long-term maintenance for all BMPs must be specified (as the City will not assume maintenance responsibilities for these features).The applicant shall establish a self-perpetuating drainage system maintenance program for the life of the project that includes annual inspections of any stormwater detention devices and drainage inlets. Any accumulation of sediment or other debris would need to be promptly removed. In addition, an annual report documenting the inspection and any remedial action conducted shall be submitted to the Public Works Development for review and approval.

The drainage plan shall be prepared to the satisfaction of the Engineering Division.

- **COA 5.9.4:** Prior to issuance of a building permit, should the City determine that the City's storm drain system or storm drain pumping capacity requires expansion or modification as a result of the applicants' development, the applicants shall pay for all necessary improvement costs. The timing and amount of payment shall be as determined by the City.

- **COA 5.10.1:** To properly evaluate necessary improvements, a complete water system capacity study of the on-and-off site water system which services the proposed project shall be prepared by a registered civil engineer approved by the City/District Engineer, and retained by the project developer prior to approval of a building permit. The study shall include: a map showing the project location, utility drawings for the project area (pdf and CAD files), a project description (type of development, number of units, land use, acreage, etc.), and a system demand analysis (including average daily demand, maximum daily demand, peak hour demand, and fire flow requirements) specific to the proposed development. The study shall include a detailed water pipe hydraulic flow analysis to determine whether the existing water distribution system is properly sized to meet the projected new water demands on the project site. All needed construction improvements to upsize the existing water distribution system to meet the demands of the new project shall be constructed to meet California Fire Code and Foster City Fire Department requirements, by the applicant at the applicant's sole cost.

- **COA 5.10.3:** Water lines shall be designed for fire flows to meet California Fire Code and Fire Department requirements.

- **COA 8.1:** Submit documentation and plans showing compliance with Chapter 8.8 of the EMID Code, including, but not limited to submittal of the Outdoor Water Use Efficiency Checklist.

- **COA 9.15:** All excess fill shall be disposed of in accordance with City requirements.

- **COA 10.1:** Prior to occupancy the applicant shall arrange a joint field meeting with representatives of the Water Department to perform a visual survey of the condition of the existing water distribution system (including testing of valves and appurtenances) in the vicinity of the project site. The applicant shall prepare a post-construction survey report to be submitted to the Foster City Public Works Department for review. Report shall document any necessary repairs required to the existing water supply infrastructure. The applicant shall be responsible for constructing and financing any such repairs.

- **COA 10.7:** Prior to occupancy the existing storm drain pipe lines on the project site and downstream to the nearest lagoon inlet shall be cleaned and sediment removed at the completion of the project. Applicant shall submit a map illustrating the route to be televised for approval of the City/District Engineer prior to sediment removal. The storm drain pipe lines shall be televised after cleaning to verify that the sediment has been removed and to identify any damages to the storm drain pipe lines during construction. A post construction survey report shall be prepared identifying facilities to be repaired and confirming removal of sediment from storm lines. Sediment left in mains shall be subject to re-cleaning at the applicant's sole cost.

4.9.2 Impacts and Mitigation Measures

The following section presents a discussion of the impacts related to utilities and infrastructure that could result from implementation of the proposed project. The section begins with the significance criteria, which establish the thresholds to determine if an impact is significant. The latter part of this section presents the impacts associated with implementation of the proposed project and identifies applicable COAs and recommends mitigation measures, if required.

4.9.2.1 Significance Criteria

The proposed project would have a significant impact on the environment related to utilities and service systems if it would:

1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;

2) Require new or expanded entitlements from the water service provider in order to provide sufficient water supplies;

3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or

4) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals or be inconsistent with federal, State, or local statutes or regulations related to solid waste.

4.9.2.2 Project Impacts

The following discussion describes the potential impacts related to utilities and service systems that could result from implementation of the proposed project.

1) Require or result in the relocation or construction of new or expanded utilities and service facilities

Water and Wastewater. Water service on the project site is provided by a water main within Vintage Park Drive that includes a tie-in for an existing fire hydrant along the sidewalk. The proposed project would include new 8-inch water mains on the project site that would connect to this existing fire hydrant for both domestic water and fire water service. Additionally, 12-inch water main is within a public utility easement (PUE) on the western boundary of the project site, where it terminates near the center of the site. The proposed project would include connections to this additional water main for fire service. As described above, COA 5.10.1 requires the preparation of a water system capacity study to ensure the surrounding water infrastructure is appropriately sized. COA 5.10.1 requires the project applicant to construct all necessary improvements to the water distribution system. Therefore, compliance with COA 5.10.1 would ensure this impact would be less than significant.

Wastewater service to the project site is provided by sanitary sewer lines that run through Vintage Park Drive, Chess Drive, and the PUE along the western boundary. The proposed project would extend the existing sanitary sewer line within the PUE to run the length of the project site, and would include two connections from the proposed building and one from the trash enclosure in the northwest corner of the site. One of the connections from the proposed building would include an oil and sand separator to receive water runoff from the ground level parking garage.

As noted above, COA 5.8.1 requires the preparation of a sewer capacity study to confirm that existing infrastructure can accommodate projected wastewater flows. The Sewer Capacity Study (included as Appendix G) prepared for the proposed project indicates that the average wastewater discharge from the project site is expected to drop from 5 gallons per minute—the estimated wastewater generation of the previous restaurant use—to 3.5 gallons per minute with implementation of the proposed project.[11] Therefore, implementation of the proposed project would not require the construction of new wastewater infrastructure, and this impact would be less than significant.

Stormwater. As described in Section 3.10, Hydrology and Water Quality, of the Initial Study (included in Appendix B), the proposed project would replace more than 10,000 square feet of existing impervious area and therefore would be required to comply with Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) MRP. Provision C.3 requires regulated projects to implement Low Impact Development (LID) source control, site design, and stormwater treatment. LID employs principles such as preserving and recreating natural landscape features and minimizing impervious surfaces to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and flow-through planter/tree boxes. The proposed project would involve a bioretention area at the northeastern corner of the project site and flow-through planters on the east side and south side of the proposed building.

Stormwater infrastructure in the vicinity of the project site includes storm drains within Vintage Park Drive and Chess Drive. Implementation of COA 5.9.1 requires the stormwater system to be capable of handling a 25-year storm and the drainage facilities to be designed in accordance with accepted engineering principles and conform to the Foster City Drainage Design Criteria. Implementation of COA 5.9.2 requires that a complete storm drainage study be approved by the City's Engineering Division, which ensures no overloading of the existing system. This COA also requires a hydrology/hydraulic analysis to be completed to verify the existing off-site storm drainage system is adequately sized to handle the runoff from the project. Implementation of COA 5.9.4 requires the sponsor to pay for all necessary improvement costs if the City determines that the City's storm drain system or storm drain pumping capacity requires expansion or modification as a result of the sponsor's proposed development.

[11] HydroScience Engineers. 2021b. 388 Vintage Park Development, Sewer Capacity Study. October 22.

Compliance with the City's COAs would ensure that the potential impacts related to on-site and off-site flooding and exceeding the local stormwater system drainage capacity as a result of changes in drainage patterns would be less than significant.

Electricity, Gas, and Telecommunications. Development of the proposed project would take place in a location that currently has electricity, gas, telephone, cable, and internet services, and these services would continue to be provided to the project site to serve the proposed development. As such, the proposed project would have a less than significant impact on electricity, gas, telecommunications, cable, and internet services.

2) Require new or expanded entitlements from the water service provider

The proposed project would result in the demolition of the existing building on the site and construction of 120,164 gross square feet of floor area as described in Section 3, Project Description. Although the proposed project does not meet the definition of a "project" as defined by SB 610 and SB 221, a WSA was prepared given EMID's reliance on the SFPUC as its sole wholesale supplier, and SFPUC's anticipation of substantial rationing of EMID's water supply during dry years. The WSA is included in Appendix F. The Foster City City Council approved and adopted the 2020 UWMP in July 2021. The 2020 UMWP included and addressed the proposed project.

The proposed project would result in 1.8 mgy, or 5.7 AFY, of additional water demand per year. It should be noted that if the historical use of the project site were taken into account, the proposed project would result in a net decrease of approximately 2.1 mgy compared to the previous restaurant use. However, to be conservative, the WSA does not apply the deduction for historic water use, and therefore an increase of 1.8 mgy is used. As shown previously in Table 4.9.B, the EMID would have a surplus in normal years of at least 349 mgy through 2045. As described previously, this water supply is assured through 2034, with provisions for extension to 2044. Therefore, as shown in Table 4.9.D, the EMID would have enough water supply to meet demand during normal years with implementation of the proposed project.

Table 4.9.D: EMID Water Supply and Demand Projections Plus Projects (MG)

	2025	2030	2035	2040	2045
Normal SFPUC Water Supply Assurance	2,154	2,154	2,154	2,154	2,154
Demand Projection for EMID with Passive and Active Conservation[1]	1,615	1,646	1,681	1,723	1,805
Estimated Remaining SFPUC Supply	539	508	473	431	349
Estimated Remaining Supply Reliability	25%	23%	22%	20%	16%

Source: 2020 Urban Water Management Plan (Foster City, City of 2021).

[1] This includes the proposed project and all known pending development projects in the EMID service area that could result in increased water demand.

EMID = Estero Municipal Improvement District
SFPUC = San Francisco Public Utilities Commission
MG = millions of gallons

As shown in Table 4.9.C, 5 consecutive dry years could result in a water shortage of up to 46 percent. In the event of prolonged drought conditions, EMID would implement the Water Shortage Contingency Plan (WSCP),[12] which includes six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent shortage and identifies a suite of demand reduction measures for the EMID to implement at each level. Therefore, because implementation of the WSCP could reduce demand by more than 46 percent (the total shortage in the fifth consecutive dry year) water demand associated with the proposed project and all foreseeable development could be accommodated during multiple dry years through implementation of the mandatory demand reductions outlined in the WSCP. Additionally, compliance with Estero Municipal Improvement District Code Section 8.70 and the California Green Building Code would ensure that all indoor water use would be water-efficient to minimize water consumption.

The proposed project would represent an increase in water demand within the anticipated supply range for the City. However, this increase would be incremental and would not lead to insufficient water supplies in existing entitlements and resources or require new or expanded entitlements. No new water entitlements would be required to serve the proposed project. Therefore, the project would result in a less than significant impact on potable water supply.

3) Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand

As previously described, the WWTP's average daily dry weather capacity is 15.7 mgd, of which 4.3 mgd is the purchased capacity for the EMID. In 2013, the WWTP had an average daily dry-weather flow of 12.3 mgd, and the EMID's average daily flow was 3.1 mgd. The average daily flow for both the WWTP and the EMID's portion is within the average daily flow design capacity. According to the WSA prepared for the proposed project (included as Appendix F), the proposed project would result in approximately 5.7 AFY, or approximately 1.8 mgy, of additional water demand per year. Assuming the total amount of water demand generated by the project is equal to the total amount of wastewater generated, the proposed project would generate approximately 1.3 mgy of wastewater (0.004 mgd). This method of estimating the project's wastewater flows assumes that all water used by the project would enter the City's sewer system. This assumption overestimates the amount of wastewater created, as a portion of the water demanded by the project would be used for purposes of landscaping and other uses that would not enter the City's sewer system. The net increase of 0.004 mgd would increase the WWTP and the EMID's portion of the average daily flow. However, this increase would be incremental in both cases.

Therefore, because the proposed project would allow EMID to remain well below its allocated daily flow capacity at the WWTP, it would result in a less-than-significant impact on wastewater treatment and disposal, as no new wastewater facilities would be required to serve the project.

[12] Estero Municipal Improvement District. 2021. *2020 Urban Water Management Plan*. July. Note: The Water Shortage Contingency Plan is included in the Urban Water Management Plan.

4) Generate solid waste in excess of established standards or landfill capacity or otherwise impair or be inconsistent with solid waste reduction goals or applicable regulations

The project would be served by landfills with the capacity to handle solid waste generated by the operational phases of the proposed project. As required by AB 939, the California Integrated Waste Management Act, a minimum of 50 percent of the City's waste must be recycled. Per the City's construction and demolition ordinance, the construction contractor would be required to recycle a minimum of half of all demolition and construction debris to meet City requirements. Chapter 15.44 (Ordinance 593) of the Foster City Municipal Code requires construction contractors to take their construction and demolition debris to a facility that processes construction and demolition materials for recycling. Most of these facilities yield recycling rates in excess of 80 percent. The typical remaining refuse sent to the landfill is 10 to 15 percent of the debris. This would not substantially decrease the available capacity at the Ox Mountain Sanitary Landfill.

In 2006, CalRecycle provided an estimate that a commercial development generates 10.53 pounds of solid waste per employee on a daily basis.[13] The proposed project would result in the addition of 213 employees, and therefore would generate 2,243 pounds of waste per day. This represents 0.02 percent of the total daily permitted throughout for the Shoreway Environmental Center, which is permitted for a daily throughput of 3,000 tons of solid waste and recyclables. The amount of solid waste generated by operation of the proposed project would not exceed the landfill capacity. In addition, Allied Waste Management currently provides recycling services to the project site. These services contribute to a reduction in solid waste generated by proposed development. The design and locations of on-site recycling bins serving new development would be subject to City review and approval prior to issuance of building permits. Therefore, development of the proposed project would have a less than significant impact on landfill capacity.

4.9.2.3 Cumulative Impacts

The cumulative geographic context for utilities for development consists of the project site in addition to the surrounding areas and uses abutting the project site.The area surrounding the project site is largely developed with a mix of commercial, residential, public, and infrastructure uses. Development of the proposed project would increase the intensity of residential development within the vicinity of the project site; however, other development projects are dispersed geographically throughout the City such that they would not combine with the project to result in cumulative impacts related to utilities. Additionally, all other cumulative development has been, or will be, subject to development guidance contained within the General Plan, prescribed by zoning and standard COAs, and enforced through the building permit process to avoid demand for utility service that exceeds the City's current capacity. Individual development projects are required to demonstrate that capacity is available and provided by existing infrastructure prior to approval, or is required to construct or pay the fair share towards needed upgrades if existing systems are insufficient. Based on the information in this section and for the reasons summarized above, development of the proposed project would not contribute to any significant adverse cumulative utility impacts when considered together with other cumulative development.

[13] CalRecycle. 2019. Estimated Solid Waste Generation Rates. Website: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates (accessed August 2021).

5.0 ALTERNATIVES

In accordance with CEQA and the CEQA Guidelines (Section 15126.6), an EIR must describe a reasonable range of alternatives to the project, or to the location of the project, that could attain most of the project's basic objectives, while avoiding or substantially lessening any of the significantly adverse environmental effects of the project. An EIR does not need to consider every conceivable alternative to a project, rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

As an EIR identifies ways to mitigate or avoid significant effects that a project may have on the environment, the discussion of alternatives should focus on alternatives to the project or its location that are capable of avoiding or substantially lessening significant effects of the project. The EIR needs to include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project, the significant effects of the alternative should be discussed, but in less detail than the significant effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. CEQA states that an EIR should not consider alternatives "whose effect cannot be ascertained and whose implementation is remote and speculative."

As described in more detail in Chapter 3, Project Description, the proposed project would involve redevelopment of the project site, which is currently developed with a single-story, approximately 10,120-square-foot vacant commercial building, with an approximately 120,164-square-foot, four-story office building, including approximately 95,931 square feet of R&D office use, a ground-level parking podium, and surface parking totaling 210 vehicle spaces, as well as associated open space, circulation and loading, and infrastructure improvements.

As provided by the project sponsor, the objectives of the proposed project are to:

- Align with Foster City General Plan policies designating the project site for research/office park uses;
- Activate a significant but previously neglected intersection and entrance into the Vintage Park neighborhood;
- Create more economic development opportunities in Foster City;
- Support existing businesses within Foster City by bringing additional workers into the City;
- Increase the amount of life sciences research facilities available in Foster City to create economic benefit to the City;
- Create a modern, efficient, and attractive building that will attract life science tenants to Foster City; and

- Enhance Foster City's reputation as a center for life sciences companies within the greater San Francisco Bay Area.

The potential environmental effects of implementing the proposed project are analyzed in Chapter 4, Setting, Impacts, and Mitigation Measures. The proposed project has been described and analyzed in the previous chapters and in the Initial Study (Appendix B), with an emphasis on evaluating significant impacts resulting from the project and identifying mitigation measures to avoid or reduce these impacts to a less-than-significant level. It should be noted that all of the impacts identified for the proposed project can be mitigated to a less-than-significant level with implementation of the recommended mitigation measures.

The two alternatives to the proposed project that are discussed and evaluated in this chapter are the following:

- **No Project Alternative.** Under the No Project alternative, the project site would continue to be occupied by the existing single-story 10,120-square-foot commercial building. It is assumed that the building would continue to be vacant. No modifications to existing site access or infrastructure would occur.

- **Restaurant Alternative.** Under the Restaurant alternative, the project site would continue to be occupied by the existing single-story, 10,120-square-foot commercial building. It is assumed that a new sit down restaurant use would occupy the building. Exterior modifications to the existing building could occur; however, no modifications to the existing site access or infrastructure would occur.

These alternatives represent a reasonable range of potential alternatives to the proposed project in light of the objective of further reducing impacts that are already less than significant with mitigation as identified in this EIR. This EIR determined that the proposed project would result in no significant and unavoidable impacts; therefore, rather than focusing on alternatives that would reduce impacts from significant and unavoidable to less than significant, these alternatives were designed to represent the development for the site envisioned by the Foster City General Plan and Vintage Park Design Guidelines (i.e., commercial restaurant use). A few other potential alternatives were also considered, as discussed later in this chapter; however, none of these alternatives would substantially reduce or avoid the environmental impacts of the proposed project and/or would not meet many of the basic project objectives and were therefore ultimately not selected for further analysis.

The purpose of this discussion of alternatives to the proposed project is to enable decision makers to evaluate the project by considering how alternatives to the project as proposed might reduce or avoid the project's impacts on the physical environment. The analysis in this chapter provides both a quantitative and qualitative evaluation of the environmental impacts that could be associated with each alternative and compares those potential impacts to those identified for the proposed project as described in Chapter 4, Setting, Impacts, and Mitigation Measures of this EIR.

5.1 NO PROJECT ALTERNATIVE

The following provides a description of the No Project alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the No Project alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the No Project alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the proposed project.

5.1.1 Principal Characteristics

The No Project alternative assumes that the proposed project would not be developed and that the project site would generally remain in its current condition. The project site would continue to be occupied by a single-story 10,120-square-foot commercial building. It is assumed that the existing vacant condition of the building would continue, that the site would remain underutilized, and site maintenance would continue to be deferred. The existing 55 trees on the site would not be removed and no modifications to existing site access of infrastructure would occur.

5.1.2 Analysis of the No Project Alternative

The potential impacts associated with the No Project alternative are described below. As discussed, the No Project alternative would avoid all of the less than significant impacts of the proposed project and no mitigation measures would be required. However, the No Project alternative would also not achieve any of the objectives of the proposed project.

5.1.2.1 Land Use and Planning

Implementation of the No Project alternative would not result in any new construction and would result in the continuation of existing vacant conditions on the project site, and therefore the No Project alternative would not result in the physical division of an established community and would not result in any conflicts with any plans, policies, or ordinances adopted for the purposes of avoiding or mitigating an environmental effect. Therefore, compared to the less than significant impacts of the proposed project, the No Project alternative would have no impact related to land use and planning. However, it should be noted that the site would continue to be underutilized and would likely remain vacant under the No Project alternative.

5.1.2.2 Aesthetics

Implementation of the No Project alternative would not result in any new construction on the project site, and therefore would not introduce any new buildings or structures that could have substantial adverse effects on scenic vistas, conflict with applicable regulations governing scenic quality, cast any new shadows, or create any new light or glare. Similar to the proposed project, the No Project alternative would not be located near a State scenic highway. Therefore, compared to the less than significant impacts of the proposed project, there would be no impacts related to aesthetics. However, it should be noted that the existing conditions at the site would continue to deteriorate from a lack of maintenance and activity, resulting in degraded visual conditions of the site over time.

5.1.2.3 Transportation

Implementation of the No Project alternative would not result in any increases in automobile, transit, bicycle, or pedestrian travel to or from the project site, as the site is anticipated to remain in its current vacant condition. Therefore, compared to the less than significant impacts of the proposed project, there would be no impact related to conflicts with applicable transportation-related plans, policies and ordinances; vehicle miles traveled (VMT); design hazards; and emergency access. Modifications to the project plans to avoid design hazards, as identified in Mitigation Measures TRA-1 and TRA-2, would not be required under this alternative. Air Quality

Implementation of the No Project alternative would not result in demolition or construction activity within the project site. As a result, pollutant and odor concentrations would not be increased and dust, exhaust, and organic emissions related to construction would not be generated; implementation of COA 9.5 would not be required to reduce construction-period air quality impacts. Similarly, this alternative would not result in new exposure of residents to toxic air contaminants. Finally, this alternative would not result in the development of office uses on the site and would not result in an increase in operational vehicle trips in the city; therefore, the No Project alternative would not result in the less than significant project impacts related to Clean Air Plan implementation. With implementation of the No Project alternative, there would be no impact on air quality.

5.1.2.4 Greenhouse Gas Emissions

Implementation of the No Project alternative would not result in any demolition or construction activity within the project site, nor would new employees be located on the site. As a result, this alternative would not result in the generation of construction-period greenhouse gas (GHG) emissions. Therefore, implementation of COA 9.5 would not be necessary to reduce construction emissions. Similarly, the No Project alternative would not result in an increase in VMT, daily vehicle trips, or utility use (i.e., electricity, water, and wastewater) on the project site; therefore, the No Project alternative would not result in the less than significant project impacts related to operational-period GHG emissions and potential conflicts with applicable plans, policies, or regulations adopted for the purposes of reducing the emission of GHGs. With implementation of the No Project alternative, there would be no impact on GHG emissions.

5.1.2.5 Noise

Implementation of the No Project alternative would not result in any demolition or construction activity within the project site, nor would new employees be located on the site. Therefore, the No Project alternative would not expose surrounding land uses to short-term noise or vibration during construction and implementation of Mitigation Measure NOI-1 would not be required. Noise at the project site would not increase above that already occurring on the site and no increase in traffic noise would occur. With implementation of the No Project alternative, there would be no impact related to noise.

5.1.2.6 Hazards and Hazardous Materials

Implementation of the No Project alternative would not result in any demolition or construction activity within the project site, nor would new employees be located on the site. Therefore, the No

Project alternative would not create significant hazards to the public, including schools within one-quarter mile, or the environment through the routine transport, use, or disposal of hazardous materials or as a result of an accident involving the release of hazardous materials into the environment. No modifications to existing site access or infrastructure would occur, and therefore no impacts related to emergency evacuation plans would occur. The No Project alternative would also not result in any impacts related to hazardous materials sites pursuant to Government Code Section 65962.5, airport-related safety hazards, or wildland fires. With implementation of the No Project alternative, there would be no impact related to hazards and hazardous materials.

5.1.2.7 Public Services

Implementation of the No Project alternative would not result in any demolition or construction activity within the project site, nor would new employees be located on the site. Therefore, the No Project alternative would not result in the provision of additional fire or police services, or the need for any new of physically altered governmental facilities. With implementation of the No Project alternative, there would be no impact related to public services.

5.1.2.8 Utilities and Service Systems

Implementation of the No Project alternative would not result in any demolition or construction activity within the project site, nor would new employees be located on the site. Therefore, the No Project alternative would not require the relocation or construction of any new utilities or new or expanded entitlements, and would not result in the generation of any wastewater or solid waste. With implementation of the No Project alternative, there would be no impact related to utilities and service systems.

5.2 RESTAURANT ALTERNATIVE

The following provides a description of the Restaurant alternative and its anticipated environmental impacts. The emphasis of the analysis is on comparing the anticipated environmental impacts of the Restaurant alternative to the environmental impacts associated with the proposed project. The discussion includes a determination of whether or not the Restaurant alternative would reduce, eliminate, or create new significant environmental impacts and would or would not meet the objectives of the proposed project.

5.2.1 Principal Characteristics

The Restaurant alternative assumes that the project site would generally remain in its current condition, but that the existing vacant approximately 10,120-square-foot building would be occupied by a sit down restaurant use, similar to former conditions. Exterior modifications to the existing building and surface parking lot could occur to improve the visual conditions at the site; however, no modifications to the existing site access or infrastructure would occur.

5.2.2 Analysis of the Restaurant Alternative

The potential impacts associated with the Restaurant alternative are described below. As discussed, the Restaurant alternative would avoid all of the less than significant impacts of the proposed

project and no mitigation measures would be required. However, the Restaurant alternative would also not achieve any of the objectives of the proposed project.

5.2.2.1 Land Use and Planning

Implementation of the Restaurant alternative would not result in any new construction or circulation improvements but would result in the location of a new restaurant use within the existing building on the site, consistent with the use envisioned for the site in the Vintage Park Design Guidelines Land Use Map. No discretionary planning approvals would be required since a restaurant is an approved use for the site. Therefore, the Restaurant alternative would not result in the physical division of an established community and would not result in any conflicts with any plans, policies, or ordinances adopted for the purposes of avoiding or mitigating an environmental effect. Compared to the less than significant impacts of the proposed project, the Restaurant alternative would have no impact related to land use and planning.

5.2.2.2 Aesthetics

Implementation of the Restaurant alternative would not result in any new construction on the project site, and therefore would not introduce any new buildings or structures that could have substantial adverse effects on scenic vistas, conflict with applicable regulations governing scenic quality, cast any new shadows, or create any new light or glare. Similar to the proposed project, the Restaurant alternative would not be located near a State scenic highway. Therefore, compared to the less than significant impacts of the proposed project, there would be no impacts related to aesthetics. However, it is assumed that with a new restaurant use on the site, the visual conditions at the project site would improve with exterior building improvements and resumed site maintenance and landscaping care.

5.2.2.3 Transportation

Compared to the proposed project, implementation of the Restaurant alternative would result in an increase in vehicle trips to and from the site. As described in Section 4.3, Transportation, trip generation rates per employee were used instead of trip rates per square foot of office use for the proposed project, resulting in 699 daily trips, 78 AM peak hour trips, and 85 PM peak hour trips. For the Restaurant alternative, the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition rates for “High-Turnover (Sit-Down) Restaurant” were used (ITE Code 932), reflecting a similar type of restaurant use as was previously located at the site. At approximately 10,120 square feet, the Restaurant alternative would generate approximately 1,140 daily trips, including 100 AM peak hour trips and 100 PM peak hour trips. Although the number of daily trips would be substantially greater than the proposed project, there would be more variation throughout the day, resulting in only a slightly greater AM and PM peak hour trip generation as compared to the proposed project (approximately 20 more AM and 10 more PM peak hour trips). This increase in the number of trips, combined with no modifications to site access or circulation as compared to current conditions, would not substantially increase the severity of the less than significant project impacts associated with plans and programs that address the circulation system, including transit, roadway, pedestrian, or bicycle facilities. Similarly, emergency access impacts would also continue to be less than significant. Implementation of Mitigation Measures TRA-1 and TRA-2, which recommend site plan modifications to avoid design hazards associated with the proposed project, would not be

required as there would be no impact. Finally, because a restaurant use is considered to be a locally-serving retail use, and because the use would be less than 50,000 square feet in size, according to guidance from the Office of Planning and Research the Restaurant alternative would have no impact on VMT because existing VMT would be redistributed throughout the city. Therefore, implementation of a Transportation Demand Management plan would not be required under the Restaurant alternative. Similar to the proposed project, impacts associated with the Restaurant alternative would be less than significant.

5.2.2.4 Air Quality

Implementation of the Restaurant alternative would not result in demolition or construction activity within the project site. As a result, construction-period pollutant and odor concentrations would not be increased and dust, exhaust, and organic emissions related to construction would not be generated; implementation of COA 9.5 would not be required to reduce construction-period air quality impacts. Similarly, this alternative would not result in new exposure of residents to toxic air contaminants. Finally, although this alternative would result in the operation of a restaurant use on the site and an increase in operational vehicle trips in the city as compared to existing conditions and the proposed project, this increase would only be slightly greater than the increase in vehicle trips associated with the proposed project. Because total operational emissions associated with the proposed project, of which mobile source emissions comprise the majority, are well below established thresholds, this slight increase would not result in a substantial increase in operation-period air quality emissions such that the thresholds established by the BAAQMD would be exceeded and impacts would be less than significant. Therefore, like the proposed project, impacts related to Clean Air Plan implementation and increases in pollutant emissions would be less than significant.

5.2.2.5 Greenhouse Gas Emissions

Implementation of the Restaurant alternative would not result in any demolition or construction activity within the project site. As a result, this alternative would not result in the generation of construction-period GHG emissions. Therefore, implementation of COA 9.5 would not be necessary to reduce construction emissions.

This alternative would result in the operation of a restaurant use on the site and an increase in operational vehicle trips in the city as compared to existing conditions and the proposed project. This increase would be approximately 60 percent greater than the increase in vehicle trips associated with the proposed project. However, as further discussed below, the total annual operational GHG emissions generated by the proposed project, of which mobile source emissions comprise the majority, would be well below established thresholds. Therefore, an increase in vehicle trips would not be anticipated to result in a substantial increase in operation-period GHG emissions. Additionally, under this alternative, new VMT would not be generated and TDM measures would not be required. Furthermore, although the Restaurant alternative would increase utility use (i.e., electricity, water, and wastewater) on the project site compared to existing conditions, the Restaurant alternative would include approximately 92 percent (100,000 square feet) less building area than the proposed project, and therefore energy use (i.e., electricity) and resulting GHG emissions would be anticipated to be substantially less than the proposed project, further offsetting the increase in mobile source emissions. Therefore, similar to the proposed project, the Restaurant

alternative would result in less than significant impacts related to operational-period GHG emissions and potential conflicts with applicable plans, policies, and regulations adopted for the purposes of reducing the emission of GHGs.

5.2.2.6 Noise

Implementation of the Restaurant alternative would not result in any demolition or construction activity within the project site. Therefore, the Restaurant alternative would not expose surrounding land uses to short-term noise or vibration during construction and implementation of Mitigation Measure NOI-1 would not be required. Noise at the project site would increase above that already occurring on the site and, compared to the proposed project, a slightly greater increase in traffic noise would occur. Similar to the proposed project, this increase in traffic noise would not be perceptible along any roadway segments within the site vicinity. With implementation of the Restaurant alternative, noise impacts would be less than significant.

5.2.2.7 Hazards and Hazardous Materials

Implementation of the Restaurant alternative would not result in any demolition or construction activity within the project site. Therefore, the Restaurant alternative would not create significant hazards to the public, including schools within one-quarter mile, or the environment through the routine transport, use, or disposal of hazardous materials or as a result of an accident involving the release of hazardous materials into the environment. Implementation of the City's COAs related to potential release of hazardous materials during demolition and construction activities would not be required. No modifications to existing site access or infrastructure would occur, and therefore no impacts related to emergency evacuation plans would occur. The Restaurant alternative would also not result in any impacts related to hazardous materials sites pursuant to Government Code Section 65962.5, airport-related safety hazards, or wildland fires. Similar to the proposed project, with implementation of the Restaurant alternative, impacts related to hazards and hazardous materials would be less than significant.

5.2.2.8 Public Services

Implementation of the Restaurant alternative would not result in any demolition or construction activity within the project site. The restaurant use would increase the daytime population at the site due to new employees and patrons, but this increase in use compared to the proposed project would not be substantial. Therefore, the Restaurant alternative would not result in the need for the provision of additional fire or police services, or the need for any new of physically altered governmental facilities. Similar to the proposed project, with implementation of the Restaurant alternative, impacts to public services would be less than significant.

5.2.2.9 Utilities and Service Systems

Implementation of the Restaurant alternative would not result in any demolition or construction activity within the project site. The restaurant use would increase the daytime population at the site due to new employees and patrons and would likely have a slightly increased demand for utility services (i.e., water and wastewater) compared to existing conditions, but would have a decreased demand compared to the energy use of the proposed project due to the substantially smaller building size and could be accommodated by existing infrastructure and water entitlements, given

that a restaurant use previously occupied the site. Therefore, the Restaurant alternative would not require the relocation or construction of any new utilities or new or expanded entitlements, and would not result in the substantial generation of any wastewater or solid waste. With implementation of the Restaurant alternative, impacts to utilities and service systems would be less than significant.

5.3 ALTERNATIVES CONSIDERED BUT NOT SELECTED FOR FURTHER ANALYSIS

During the Notice of Preparation (NOP) comment period, the City received verbal and written suggestions for the identification and evaluation of alternatives to the proposed project (see Appendix A of this EIR). The following provides a description of various potential alternatives that were identified and considered, and the reasons why they were ultimately not selected for further evaluation in this EIR.

- **Off-Site Locations.** An alternative location was not considered for analysis because the project sponsor does not own or would not feasibly otherwise be able to gain control of a suitable vacant site within the city. In addition, an overarching objective of the project is to provide for the development of a life sciences campus within the Vintage Park neighborhood. An alternative location located outside of this area would fail to meet this and several objectives of the project. It should also be noted that the project site is an urban infill site with existing infrastructure in close proximity to existing transit. If the proposed project were relocated to a different site that is not as well served by infrastructure and transit, impacts related to transportation, air quality, and greenhouse gas emissions (primarily related to VMT) could be more significant than those identified in this EIR for the proposed project. Therefore, such an alternative was ultimately not selected for further analysis in the EIR.

- **Mixed Office/Restaurant Use.** The project sponsor conducted a financial feasibility analysis of two potential alternative development programs for the project site, in addition to the proposed project.[1] This analysis evaluated the potential for development of a mixed office and restaurant use at the site, which would include approximately 90,431 square feet of R&D use and 5,500 square feet of ground floor retail use within a building similar in size and orientation as the proposed project building. A total of 273 parking spaces would be required (63 additional spaces as compared to the proposed project). Parking would be provided within a surface parking lot and ground floor podium, similar to the proposed project, as well as within an additional below-grade level. Excavation of a below ground parking structure would result in similar but likely greater construction-period impacts due to the increased site excavation activity and overall duration. In addition, construction-period dewatering may be required as the depth of excavation for a below-grade garage would likely encounter groundwater. Because the development intensity of a potential mixed office/restaurant use project would be greater than the proposed project and none of the significant impacts identified for the proposed project would likely be avoided, this alternative was rejected from further analysis.

[1] BAE Urban Economics. 2021. Alternative Development Scenarios for 388 Vintage Park Drive, Foster City, CA. October 19.

- **Residential Use.** The financial feasibility analysis[2] conducted by the project sponsor also evaluated the potential for development of a residential use at the site, which would include approximately 95,931 square feet of residential use within a five-story building, including three levels of residential use containing 93 units (18 of which would be affordable) and a podium level courtyard over two levels of above-grade parking to accommodate 210 spaces. Development of residential use on the site would require a General Plan Amendment and rezoning of the site to allow for non-commercial/office uses. Development of residential uses on the site may also require on- and off-site access and circulation improvements. Residential uses would have a lower trip generation potential compared to the proposed project (due to the number of units that can be accommodated on the site compared to the number of employees that would be generated by the proposed project); however, residential uses would generate new VMT and, similar to the proposed project, a TDM program would likely be required to reduce VMT to below established significance thresholds. Because the development intensity of a potential residential use project would be greater than the proposed project and none of the significant impacts identified for the proposed project would likely be avoided, this alternative was rejected from further analysis.

5.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the above analysis, the No Project alternative would have the fewest impacts and would be the environmentally superior alternative. Under CEQA, if the No Project alternative is the environmentally superior alternative, the EIR must identify an environmentally superior alternative from among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). While the No Project alternative would be environmentally superior in the technical sense in that contribution to the aforementioned impacts would not occur, it would also fail to achieve any of the project's objectives.

As discussed above, the Restaurant alternative would reduce the potentially significant impacts of the proposed project related to construction and would not require the implementation of mitigation measures identified for the proposed project. Further, the Restaurant alternative would not require a General Development Plan Amendment or rezoning or any other discretionary approvals. Therefore, the Restaurant alternative is considered the environmentally superior alternative. However, this alternative would fail to meet the basic project objectives. It is also unlikely that market conditions would be conducive to a new restaurant use within the existing building on the site, and the site may continue to be subject to deferred maintenance and a lack of activity for the foreseeable future.

[2] BAE Urban Economics. 2021. Alternative Development Scenarios for 388 Vintage Park Drive, Foster City, CA. October 19.

6.0 OTHER CEQA CONSIDERATIONS

As required by CEQA, this chapter discusses the following types of impacts that could result from implementation of the proposed project: growth-inducing impacts; significant irreversible changes; effects found not to be significant; and significant unavoidable effects.

6.1 GROWTH INDUCING IMPACTS

This section summarizes the project's potential growth-inducing impacts on the surrounding community. A project is typically considered growth-inducing if it would foster economic or population growth or the construction of additional housing; if it would remove obstacles to population growth or tax community services to the extent that the construction of new facilities would be necessary; or if it would encourage or facilitate other activities that cause significant environmental effects.[1] Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

The proposed project consists of the demolition of the existing restaurant building on the project site and the construction of an approximately 120,164-square-foot office/R&D building. Development of the proposed project would not result in direct population growth within the City, as it would not include residential units. However, the proposed project would introduce 213 new employees to the project site, and therefore could induce indirect population growth resulting from employees moving to the city solely for purposes of employment. As described in the Initial Study prepared for the proposed project (included in Appendix B), based on existing employment trends in the city, this growth could potentially result in the need for up to 17 new residential units (assuming new employees live in separate households and do not currently live in Foster City). This is a conservative estimate. The projected housing units expected to be constructed in Foster City in the near term (approximately 332 dwelling units at the nearby Pilgrim Triton project and 152 senior housing units at the nearby Foster Square project) would more than satisfy the potential demand for housing associated with the proposed project. Therefore, the proposed project would not induce substantial population growth in the City, and new residents could be housed in either existing dwelling units or those that are currently under or planned for construction.

Additionally, the proposed project would consist of redevelopment of an existing urbanized site and would not require the extension of utilities or roads into undeveloped areas or directly or indirectly lead to the development of greenfield sites. Due to the location of the project site and the presence of existing uses on and in the vicinity of the site, construction of the proposed project would not induce unplanned growth in the area. Therefore, the growth that would occur as a result of the proposed project would not be substantial or adverse.

[1] *CEQA Guidelines*, 2021. Section 15126.2(d).

6.2 SIGNIFICANT IRREVERSIBLE CHANGES

An EIR must identify any significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of non-renewable resources, and secondary growth-inducing impacts that commit future generations to similar uses. CEQA suggests that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. Each of these three categories is further detailed below.

6.2.1 Changes in Land Use Which Commit Future Generations

The proposed project would allow for the redevelopment of an approximately 2.2-acre site vacant and underutilized site located in an urbanized area of Foster City. The project site and immediate area are surrounded by a mix of commercial, office, and residential development, and the site is designated Research/Office Park, which is intended for areas containing office, research and development, and manufacturing establishments with clean and quiet operations. Because the project would occur on an infill site in which a variety of land uses may be considered under the General Plan and Municipal Code, and because in the future, the site could be rezoned, in which case at the end of the useful life of the project, the use could change, it would not commit future generations to a significant change in land use.

6.2.2 Irreversible Damage from Environmental Accidents

No significant environmental damage, such as accidental spills or explosion of a hazardous material, is anticipated with implementation of the proposed project. Compliance with federal, State, and local regulations, and COAs 2.17, 2.18, 2.19, 3.1, 3.4, and 9.13, as outlined in Section 4.7, Hazards and Hazardous Materials of this EIR, would ensure that this potential impact would be reduced to a less-than-significant level. As such, no irreversible changes – such as those that might result from construction of a large-scale mining project, a hydroelectric dam project, or other industrial project – would result from development of the proposed project.

6.2.3 Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. As discussed in the Initial Study (Appendix B), the State Department of Conservation designates the site as "Urban and Built-Up Land," and the site is located in an urbanized area of Foster City. Therefore, no existing agricultural lands would be converted to non-agricultural uses. In addition, the project site does not contain known mineral resources and does not serve as a mining reserve; thus, development of the proposed project would not result in the loss of access to mining reserves. Please refer to Sections 4.2 and 4.12 of the Initial Study included in Appendix B for a discussion of impacts related to agricultural and mining resources, respectively.

Construction of the proposed project would require the use of energy, including energy produced from non-renewable resources. Energy consumption would also occur during the operational period of the proposed project. As discussed in Section 4.6, Energy, of the Initial Study, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of fuel or energy and would incorporate renewable energy or energy efficiency measures into building design,

equipment use, and transportation. Additionally, the proposed project would not require the construction of major new lines to deliver energy or natural gas as these services are already provided in the area. Therefore, the proposed project would not result in a significant impact associated with the consumption of nonrenewable resources.

6.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

The environmental topics analyzed in Chapter 4, Setting, Impacts, and Mitigation Measures, represent those topics which generated the greatest potential controversy and expectation of adverse impacts associated with development of the proposed project. As discussed in more detail in the Initial Study (Appendix B) the following topics are not addressed in this EIR because impacts related to these topics either would not occur or would be less than significant with implementation of applicable standard COAs or mitigation measures. A summary of the conclusions provided in the Initial Study analysis for each of the topics scoped out of the EIR is provided below.

6.3.1 Agricultural and Forestry Resources

The project site and vicinity are located within an urban area in Foster City. The site is currently zoned as C-M/PD on the City's Zoning Map and is classified as "Urban and Built-Up Land" by the State Department of Conservation.[2] The project site is not used for agricultural production nor does it support forestry resources. Therefore, there would be no impact to agricultural and forestry resources.

6.3.2 Biological Resources

The project site and vicinity are located with an urban area in Foster City. The project site does not provide suitable habitat for any special-status plant species due to prior disturbance at the project site and the resulting lack of native plant communities, such as wetlands, salt marsh, woodlands, and grasslands. The proposed project would result in the removal of mature trees and a vacant building, which could provide habitat for nesting birds and bats. However, implementation of Mitigation Measures BIO-1 and BIO-2, which are standard construction-period measures that are applicable to all construction projects that have the potential to impact nesting bird and bat species, would ensure that these impacts are less than significant. The project site does not contain any riparian habitat, wetlands, or wildlife movement corridors, and is not located within the boundaries of any adopted Habitat Conservation Plan. Compliance with COA 8.12 and implementation of the tree preservation guidelines within the arborist report prepared for the proposed project would ensure the proposed project would not conflict with any local policies protecting biological resources.

6.3.3 Cultural Resources

As described in the Initial Study, the existing building on the project site was built in the 1990s and is not identified as a historic resource by the City. Given the presence of fill material in all excavation areas (with the exception of the auger-cast piles, which are a type of localized disturbance providing limited potential to identify cultural resources), the likelihood of encountering intact historical

[2] California Department of Conservation, 2016. Division of Land Use Resource Protection. California Important Farmland Finder. Website: maps.conservation.ca.gov/dlrp/ciff (accessed February 19, 2019).

archaeological deposits during project construction activities is low. Implementation of COA 9.11 would ensure that the proposed project would have less than significant impacts related to the accidental discovery of archaeological and historical resources. Implementation of COA 9.12 would ensure potential impacts related to the accidental discovery of human remains would be less than significant.

6.3.4 Energy

As described in the Initial Study, energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources.

Energy use consumed by the proposed project would be associated with natural gas use, electricity consumption, and fuel used for vehicle trips associated with the project. However, energy usage associated with operation of the proposed project would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the California Energy Commission's (CEC's) 2020 Integrated Energy Policy Report. Thus, the project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and not result in any irreversible or irretrievable commitments of energy.

6.3.5 Geology and Soils

The project site is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone or an active or potentially active fault. Adherence to the requirements and guidelines of the 2019 CBC and the final design-level geotechnical investigation as required by COA 2.2 would ensure that potential impacts related to seismic ground shaking would be less than significant. The project site is located within a liquefaction hazard zone, however, the Geotechnical Investigation[3] concluded that the potential for liquefaction, liquefaction-induced settlement, and ground failures associated with liquefaction, such as lateral spreading, during a Maximum Considered Earthquake is low. The project site is not located within a landslide hazard zone as designated on a map prepared by the California Geological Survey (CGS). Compliance with the Construction General Permit and implementation of a Stormwater Pollution Prevention Plan (SWPPP) would ensure that the project would result in a less than significant impact related to erosion or loss of top soil during construction of the project. During operation of the proposed project, the project site would be covered with a new building, pavement surfaces, and landscaping, which would minimize post-development erosion. The project site is underlain by Bay Mud, which is considered to have low paleontological sensitivity. Additionally, implementation of COA 2.2 would ensure that impacts to paleontological resources would be less than significant.

[3] Rockridge Geotechnical. 2021. *Geotechnical Investigation and Ground Motion Analysis Report, Proposed Life Science Building, 388 Vintage Park Drive, Foster City, California*. April 13.

6.3.6 Hydrology and Water Quality

Compliance with the requirements of the Construction General Permit, the Municipal Regional Permit (MRP), local and National Pollutant Discharge Elimination System (NPDES) regulatory requirements, and with the City's COAs would ensure that water quality impacts due to discharge of construction-related stormwater runoff, dewatering effluent, and water quality during operation of the project would be less than significant. Groundwater on site would not be used during the operation phase of the project. Compliance with the City's COAs would ensure that the potential impacts related to on-site and off-site flooding and exceedance of the local stormwater system drainage capacity as a result of changes in drainage patterns would be less than significant. Potential flood heights resulting from a dam failure near the project site would be below the crest height (6 feet) of a levee along the Marina Lagoon in the city, and therefore it is highly improbable that a failure would cause inundation in the city or at the project site. Seiches are not considered a hazard in the San Francisco Bay based on the natural oscillations of the Bay. Based on a map prepared by the California Geological Survey (CGS), the project site is not designated as a tsunami hazard area. There is currently no approved groundwater management plan for the Santa Clara Valley Groundwater Basin, San Mateo Plain Subbasin, and therefore the project would not conflict with a groundwater management plan. Therefore, impacts related to hydrology and water quality would be less than significant.

6.3.7 Mineral Resources

The project site is located within an urban area on a developed site. Additionally, the CGS does not identify known mineral resources or mineral recovery sites within or adjacent to the project site. Therefore, the proposed project would not result in the loss of availability of a known mineral resource of value to the region or residents of the State or the loss of availability of a locally-important mineral resource recovery site.

6.3.8 Population and Housing

The proposed project does not include housing, and therefore would not directly induce population growth on the project site. The proposed project could potentially increase demand for housing in Foster City by 17 units. However, this determination is likely an overestimate, as new jobs created would reasonably be expected to attract existing City residents due to lifestyle advantages and shortened commutes. Additionally, employees would likely commute from various communities throughout the Bay Area due to the proximity of SR 92 and US 101. The project site does not contain any housing, and therefore would not displace any existing people or housing. Population and housing impacts would therefore be less than significant.

6.3.9 Public Services (Schools, Park, and Other Public Facilities)

The proposed project does not include any residential uses, and would not directly affect student population. A fraction of employees may move to Foster City solely for employment, but this growth would only result in an incremental increase in student population, and may be spread amongst the whole school district, depending upon place of residence. Development of the project is unlikely to increase the demand for other public services, including parks, libraries, community centers, and public health care facilities, because no direct population growth would occur. In addition, the

proposed project includes on-site open space and a private roof deck that would be utilized by employees. Therefore, the proposed project would not result in an adverse effect on public services and would not require the construction of new facilities and these impacts would be less than significant.

6.3.10 Recreation

Project employees and visitors to the project site would be expected to use local parks and community facilities in the vicinity as well as regional recreational facilities. Although new employees and visitors associated with the proposed project could incrementally increase the use of these facilities, this minor increase in use is not expected to result in substantial physical deterioration of local parks, trails, and community centers and this impact would be less than significant.

6.3.11 Tribal Cultural Resources

The City sent letters describing the proposed project and maps depicting the project site to Native American tribes that the Native American Heritage Commission identified as traditionally and culturally affiliated with the project area. To date, no California Native American tribe has formally requested consultation with the City, consistent with the requirements of Public Resources Code 21080.3.1. As such, formal City-tribal government consultations for the proposed project were not initiated. The project would have no impact on known tribal cultural resources.

6.3.12 Wildfire

The project site and adjacent areas are not located in a Very High Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL FIRE) and the project site is not located within any State responsibility areas (SRA) for fire service. The project site project is generally level, and is bound by existing development on all sides. Therefore, the proposed project would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, and this impact would be less than significant.

6.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

Implementation of the proposed project would not result in any significant unavoidable impacts.

7.0 REPORT PREPARATION

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