

Draft

DOWNTOWN PRECISE PLAN (DTPP) PLAN-WIDE AMENDMENTS

Subsequent Environmental Impact Report

State Clearinghouse No. 2021090249

Prepared for
City of Redwood City

November 14, 2022



Draft

DOWNTOWN PRECISE PLAN (DTPP) PLAN-WIDE AMENDMENTS

Subsequent Environmental Impact Report

Prepared for
City of Redwood City

November 14, 2022

State Clearinghouse No. 2021090249

575 Market Street
Suite 3700
San Francisco, CA 94105
415.896.5900
esassoc.com



Atlanta	Orlando	San Diego
Bend	Palm Beach County	San Francisco
Camarillo	Pasadena	San Jose
Irvine	Pensacola	Sarasota
Los Angeles	Petaluma	Seattle
Mobile	Portland	Tampa
Oakland	Sacramento	

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

TABLE OF CONTENTS

Downtown Precise Plan (DTPP) Plan-Wide Amendments Draft SEIR

	<u>Page</u>
Chapter 1, Introduction	1-1
1.1 Purpose of this SEIR.....	1-1
1.2 Determination to Prepare an SEIR	1-2
1.3 SEIR Relationship to Previous CEQA Documentation	1-3
1.4 Environmental Review Process	1-3
1.5 SEIR Scope.....	1-5
1.6 SEIR Organization and Content	1-6
1.7 “Significant Impacts” and Other Key SEIR Terminology	1-6
1.8 Intended Uses of the SEIR	1-7
Chapter 2, Executive Summary	2-1
2.1 Project Overview	2-1
2.2 Required Approvals	2-2
2.3 Environmental Issues (Areas of Controversy).....	2-3
2.4 Summary of SEIR Impacts and Mitigation Measures	2-5
2.5 Summary of Alternatives	2-34
2.6 Mitigation Implementation	2-35
Chapter 3, Project Description	3-1
3.1 Introduction	3-1
3.2 Project Location	3-3
3.3 Project Objectives	3-3
3.4 Existing Land Uses and Development Controls	3-5
3.5 Project Components	3-10
3.6 Uses of the EIR and Required Approvals.....	3-18
Chapter 4, Land Use and Planning	4-1
4.1 Environmental Setting	4-1
4.2 Regulatory Setting.....	4-3
4.3 Impacts and Mitigation Measures	4-9
4.4 References	4-16
Chapter 5, Population and Housing.....	5-1
5.1 Environmental Setting	5-1
5.2 Regulatory Setting.....	5-5
5.3 Impacts and Mitigation Measures	5-8
5.4 References	5-16
Chapter 6, Aesthetics and Shadows	6-1
6.1 Environmental Setting	6-1
6.2 Regulatory Setting.....	6-4
6.3 Impacts and Mitigation Measures	6-6
6.4 References	6-14

	<u>Page</u>
Chapter 7, Cultural and Historic Resources and Tribal Cultural Resources	7-1
7.1 Environmental Setting	7-2
7.2 Regulatory Setting.....	7-10
7.3 Impacts and Mitigation Measures	7-16
7.4 References	7-25
Chapter 8, Public Services and Recreation	8-1
8.1 Environmental Setting	8-2
8.2 Regulatory Setting.....	8-10
8.3 Impacts and Mitigation Measures	8-12
8.4 References	8-21
Chapter 9, Transportation and Circulation	9-1
9.1 Environmental Setting	9-3
9.2 Regulatory Setting.....	9-11
9.3 Impacts and Mitigation Measures	9-15
9.4 References	9-33
Chapter 10, Utilities and Infrastructure	10-1
10.1 Environmental Setting	10-3
10.2 Regulatory Setting.....	10-9
10.3 Impacts and Mitigation Measures	10-23
10.4 References	10-43
Chapter 11, Noise and Vibration	11-1
11.1 Environmental Setting	11-2
11.2 Regulatory Setting.....	11-12
11.3 Impacts and Mitigation Measures	11-19
11.4 References	11-29
Chapter 12, Air Quality	12-1
12.1 Environmental Setting	12-2
12.2 Regulatory Setting.....	12-12
12.3 Impacts and Mitigation Measures	12-23
12.4 References	12-45
Chapter 13, Climate Change	13-1
13.1 Environmental Setting	13-1
13.2 Regulatory Setting.....	13-13
13.3 Impacts and Mitigation Measures	13-29
13.4 References	13-50
Chapter 14, Hazards and Hazardous Materials	14-1
14.1 Environmental Setting	14-2
14.2 Regulatory Setting.....	14-3
14.3 Impacts and Mitigation Measures	14-7
14.4 References	14-13
Chapter 15, Biological Resources	15-1
15.1 Environmental Setting	15-1
15.2 Regulatory Setting.....	15-6
15.3 Impacts and Mitigation Measures	15-10
15.4 References	15-17

	<u>Page</u>
Chapter 16, Geology and Soils	16-1
16.1 Environmental Setting.....	16-2
16.2 Regulatory Setting.....	16-6
16.3 Impacts and Mitigation Measures	16-8
16.4 References.....	16-14
Chapter 17, Cumulative Impacts	17-1
17.1 Cumulative Development Assumptions.....	17-3
17.2 Cumulative Impacts and Mitigation Measures.....	17-6
Chapter 18, Other CEQA-Required Assessment Considerations	18-1
18.1 Growth-inducing Effects.....	18-1
18.2 Significant Unavoidable Impacts.....	18-3
18.3 Irreversible Environmental Changes.....	18-6
18.4 Effects Found Not to be Significant	18-7
Chapter 19, Alternatives to the Proposed Project	19-1
19.1 Introduction	19-1
19.2 DTPP EIR Alternatives.....	19-2
19.3 Project Objectives	19-3
19.4 Significant Impacts of the Proposed Project.....	19-4
19.5 SEIR Alternatives Considered but Dismissed from Further Evaluation	19-9
19.6 Selection and Analysis of SEIR Alternatives	19-10
19.7 Environmentally Superior Alternative.....	19-27
Chapter 20, Report Preparers	20-1
20.1 City of Redwood City	20-1
20.2 Others.....	20-1

Appendices

A. Notice of Preparation (NOP) and Responses to the NOP	A-1
B. Gatekeeper Project Details	B-1
C. Transportation Analysis.....	C-1
D. Supplemental Noise and Vibration Information.....	D-1
E. Water Supply Evaluation	E-1

List of Figures

Figure 3-1 Project Location	3-4
Figure 3-2 Gatekeeper Project Locations and Potential Future DTPP Boundary Expansion	3-7
Figure 3-3 Circulation Changes.....	3-16
Figure 8-1 Redwood City Recreational Planning Areas	8-7
Figure 9-1 Existing and Planned Bicycle Facilities	9-8
Figure 9-2 Existing Transit Service	9-10
Figure 11-1 Effects of Noise on People	11-3
Figure 11-2 Noise Monitoring Locations	11-9
Figure 11-3 Redwood City Noise Guidelines for Land Use Planning	11-17
Figure 15-1 Representative Photos of Habitat Types in DTPP Plan-Wide Area.....	15-3

List of Tables

Table 2-1	Summary of Potentially Significant Impacts and Recommended Mitigation Measures.....	2-7
Table 2-2	Summary Comparison of Significant Impacts and Mitigation Measures: DTPP Plan-Wide Amendments and DTPP FEIR	2-26
Table 3-1	Assumed Increases in DTPP Development	3-16
Table 4-1	Existing Land Uses in the DTPP Area.....	4-2
Table 5-1	Population, Housing, and Employment Growth in Redwood City and San Mateo County (2010–2040)	5-3
Table 5-2	Jobs and Housing Balance in Redwood City and San Mateo County (2010 and 2020)	5-4
Table 5-3	Final Regional Housing Needs Allocation, 2023–2031	5-5
Table 5-4	Existing and Proposed Redwood City and DTPP Plan-Wide Amendments Population, Housing, and Employment Growth	5-9
Table 7-1	CEQA-Defined Historic Resources Within the DTPP Area	7-7
Table 7-1 (continued)	CEQA-Defined Historic Resources Within the DTPP Area	7-8
Table 8-1	Parks within the Downtown Recreational Planning Area	8-6
Table 8-2	Estimated Student Generation.....	8-19
Table 9-1	Existing Transit Service	9-9
Table 9-2	General Plan Transportation Goals	9-21
Table 9-3	DTPP Goals and Guiding Principles.....	9-22
Table 9-4	RWCmoves and Walk Bike Thrive Goals	9-23
Table 9-5	Average Weekday Vehicle Trips.....	9-26
Table 9-6	Initial Residential and Office VMT Analysis Results.....	9-26
Table 9-7	Residential and Office VMT Analysis Results with City’s TDM Ordinance	9-28
Table 10-1	Estimated Water Use Reduction under Water Shortage Contingency Plan	10-34
Table 11-1	Existing and 2006 Noise Environments in the DTPP Vicinity.....	11-8
Table 11-2	Existing Traffic Noise along Roadways in the Amended DTPP Area Vicinity.....	11-10
Table 11-3	Generalized Vibration Levels from Locomotive-Powered Passenger or Freight Trains (Vibration Decibels and Peak Particle Velocity).....	11-11
Table 11-4	Construction Vibration Damage Criteria	11-12
Table 11-5	Community Noise Exposure (DNL or CNEL)	11-14
Table 11-6	Measures of a Substantial Increase in Transportation Noise Exposure	11-25
Table 12-1	Sources, Environmental and Health Effects of Criteria Air Pollutants.....	12-3
Table 12-2	State and Federal Ambient Air Quality Standards.....	12-5
Table 12-3	Summary of Ambient Air Quality Data at the Redwood City Station.....	12-6
Table 12-4	Air Quality Index Statistics for the SFBAAB	12-7
Table 12-5	San Francisco Bay Area Air Basin Attainment Status.....	12-13
Table 12-6	Recommendations for Siting New Sensitive Land Uses	12-21
Table 12-7	BAAQMD Significance Thresholds.....	12-26
Table 12-8	Consistency with Potentially Applicable Control Measures in 2017 Clean Air Plan Control Measures	12-28
Table 12-8 (continued)	Consistency with Potentially Applicable Control Measures in 2017 Clean Air Plan Control Measures	12-29
Table 12-9	Increase in VMT versus Service Population Growth	12-33
Table 13-1	State of California Greenhouse Gas Emissions	13-8
Table 13-2	Redwood City 2017 GHG Emissions By Sector.....	13-9
Table 13-3	Existing Annual State and Regional Energy Use	13-11

	<u>Page</u>
Table 13-4 Consistency with Applicable GHG Reduction Actions in 2017 Scoping Plan Update	13-41
Table 13-4 (continued) Consistency with Applicable GHG Reduction Actions in 2017 Scoping Plan Update	13-42
Table 17-1 Boundary Method Citywide Cumulative VMT Estimates and Impact Assessment	17-19
Table 17-2 Cumulative Traffic Noise Increases along Roadways in the Plan Vicinity ..	17-27
Table 19-1 DTPP Draft EIR Alternatives Compared to the DPP: Summary of Net New Development	19-2
Table 19-2 Proposed Land Use Increases for the Proposed DTPP Plan-Wide Amendments and Alternatives.....	19-10
Table 19-3 VMT Analysis Results for Reduced Development Alternative	19-15
Table 19-4 VMT Analysis Results for Altered Land Use Mix Alternative.....	19-22

This page intentionally left blank

CHAPTER 1

Introduction

1.1 Purpose of this SEIR

This Subsequent Environmental Impact Report (SEIR) analyzes potential environmental impacts of the proposed Downtown Precise Plan (DTPP) Plan-Wide Amendments, which would consist of amendments to the DTPP and the City of Redwood City (City) General Plan, to revise certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation (including pedestrian, bicycle, and vehicular circulation); building placement; building height and massing; parking requirements; and historical resources. Because one of the drivers for the proposed DTPP Plan-Wide Amendments was the City Council’s decision, in 2020 and 2021, to advance General Plan amendments for six “Gatekeeper Projects” for which applications had been filed with the City, this SEIR considers, at a programmatic level, the reasonably foreseeable consequences of those projects. Accordingly, this SEIR evaluates a potential future extension of the northern DTPP area boundary between El Camino Real and the Caltrain tracks to accommodate one of the Gatekeeper Projects. In addition, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects and additional development potential in the DTPP. The potential boundary extension and increases in office and residential development would be considered by the City when individual projects are brought forward for action on project entitlement(s). This SEIR evaluates the proposed revisions to land use policies and development standards at a programmatic level, as the proposed amendments are area-wide policy changes intended to ensure that all future development conforms to the City’s vision for the development of the Downtown. Pursuant to the proposed DTPP Plan-Wide Amendments, any subsequent large development project that seeks a project-specific General Plan amendment must enter into a Development Agreement with the City.

Pursuant to the California Environmental Quality Act (CEQA), the City determined that a program-level SEIR is necessary to evaluate the environmental impacts of the proposed DTPP Plan-Wide Amendments.

The purpose of this SEIR is to:

- Inform the City decision makers, the general public, and responsible and trustee public agencies of the nature of the proposed DTPP Plan-Wide Amendments, their potentially significant environmental effects, feasible measures to mitigate those effects, as well as reasonable and feasible alternatives;

- To serve as a reference and tiering document for subsequent review of individual projects undertaken to implement the proposed DTPP Plan-Wide Amendments; and
- To satisfy CEQA requirements.

This SEIR is an informational document, the purpose of which is to identify the potentially significant environmental effects of implementing the proposed DTPP Plan-Wide Amendments, and to indicate the manner in which those significant effects can be avoided or significantly lessened. The SEIR also identifies any significant and unavoidable adverse impacts that cannot be mitigated to a less-than-significant level. Reasonable and feasible alternatives are identified that would avoid or substantially lessen any significant adverse environmental effects of the proposed DTPP Plan-Wide Amendments.

The City decision makers are required to consider the information in the SEIR, along with any other relevant information, in making their decision whether to approve the proposed DTPP Plan-Wide Amendments. Although the SEIR does not determine the ultimate decision that will be made regarding implementing the proposed DTPP Plan-Wide Amendments or any individual project, CEQA requires the City to consider the information in the SEIR and make findings regarding each significant effect identified in the SEIR.

1.2 Determination to Prepare an SEIR

Section 15162 (Subsequent EIRs and Negative Declarations) of the CEQA Guidelines provides:

- a. When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
 2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
 3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the

project, but the project proponents decline to adopt the mitigation measure or alternative; or

- D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Pursuant to Section 15162 of the CEQA Guidelines described above, a SEIR is required if the City, as the CEQA Lead Agency, determines on the basis of substantial evidence in light of the whole record that there have been substantial changes to the project and/or the circumstances under which the project is undertaken, or substantial new information has arisen, and that one or more of the foregoing will result in new or substantially more severe impacts and that thus necessitate major revisions to the prior environmental impact report and/or new mitigation measures or alternatives are now feasible.

The City has determined, pursuant to CEQA, that the proposed General Plan and DTPP Plan-Wide Amendments will require the preparation of a SEIR to substantially revise the DTPP Final Environmental Impact Report (DTPP Final EIR, State Clearinghouse No. 2006052027), a programmatic environmental analysis certified in 2011. A SEIR is warranted because the proposed DTPP Plan-Wide Amendments represent a substantial change to the DTPP and may result in new or substantially more severe significant environmental effects than those identified in the certified DTPP Final EIR.

1.3 SEIR Relationship to Previous CEQA Documentation

As noted above, the SEIR analyzes proposed amendments to the City's General Plan and DTPP (collectively referred to as "DTPP Plan-Wide Amendments") that would, if adopted, revise the DTPP adopted in 2011 and subsequently amended in 2012, 2013, and 2016. The SEIR relies on and incorporates information contained in the DTPP Final EIR where that information remains relevant, and provides additional information and analysis where warranted. Impact evaluations are based on an updated (2021 baseline) and identify where conclusions vary from the DTPP Final EIR. To facilitate comparison to the DTPP Final EIR, the SEIR is organized in the same way, with the same chapter headings.

1.4 Environmental Review Process

1.4.1 Notice of Preparation and Public Scoping

On September 14, 2021, a Notice of Preparation (NOP) was published for the DTPP Plan-Wide Amendments SEIR. A 31-day public comment period ended on October 14, 2021. A copy of the NOP is included in **Appendix A**. A scoping meeting was held on September 21, 2021 via teleconference to accept public input on environmental topics to be analyzed in the SEIR and approaches to the impact analyses.

Three NOP comment letters were received regarding the scope of the SEIR. A letter from the Native American Heritage Commission (NAHC) recommended consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed DTPP Plan-Wide Amendments.

A letter from the California Department of Transportation (Caltrans) recommends applying screening criteria established in the City's adopted vehicle miles traveled (VMT) policy to determine whether there may be a significant effect on the environment. If the proposed DTPP Plan-Wide Amendments do not meet the screening criteria, a detailed VMT analysis should be undertaken and included in the SEIR. The letter also identifies potential transportation demand management (TDM) strategies to reduce VMT.

A letter from Lozano Smith Attorneys at Law on behalf of the Sequoia Union High School District expresses concern for environmental impacts on students and the District. The District requests analysis regarding transportation operations, including examination of pedestrian safety; air quality; noise; and student generation.

The issues identified during the scoping process are addressed in this SEIR.

1.4.2 Draft SEIR

This Draft SEIR is being circulated to governmental agencies and to interested organizations and individuals that may wish to review and comment on the document. CEQA Guidelines sections 15086(c) and 15096(d) require Responsible area of expertise or project activities that are required to be carried out or approved by the agency, and the agency should support those comments with either oral or written documentation. Publication of the Draft SEIR initiates a 45-day public review period, during which time the City will accept comments on the Draft SEIR. The public review period for the Draft SEIR for the proposed DTPP Plan-Wide Amendments is from November 14, 2022 through December 29, 2022.

How to Comment on this SEIR

If you have comment on the adequacy or accuracy of the Draft SEIR, please direct your comments in writing, via mail or e-mail, to:

William Chui, Senior Planner
City of Redwood City
1017 Middlefield Road, Redwood City, CA 94063
(650) 780-5916 | wchui@redwoodcity.org

1.4.3 Comments and Responses and Final SEIR

Following the close of the public and agency comment period on this Draft SEIR, the City will prepare written responses to all substantive comments received in writing or orally at the public hearing that raise CEQA-related environmental issues regarding the DTPP Plan-Wide Amendments and the analysis in this SEIR. The responses will be published in the Final SEIR. The Final SEIR will be considered by the City in a public meeting and certified if it is determined

to be in compliance with CEQA. Upon certification of the Final SEIR, the City will consider whether to take the approval actions associated with the proposed DTPP Plan-Wide Amendments.

1.4.4 Mitigation Monitoring and Reporting Program

Throughout this SEIR, mitigation measures have been described in language that will facilitate establishment of a Mitigation Monitoring and Reporting Program (MMRP). As required under CEQA (CEQA Guidelines, section 15097), an MMRP will be prepared and presented to the City at the time of certification of the Final EIR for the proposed DTPP Plan-Wide Amendments and will identify the specific timing and roles and responsibilities for implementation of adopted mitigation measures.

1.5 SEIR Scope

Consistent with CEQA Guidelines section 15162, this SEIR includes only the information necessary to make the previous CEQA documentation adequate for the project as revised. As provided for in the CEQA statutes and guidelines, the environmental focus of this SEIR is limited to areas of controversy or issues related to the proposed project changes known to the City (the Lead Agency) or identified by other interested agencies and individuals in response to the City's Notice of Preparation (NOP).¹ These focused areas include (listed in the order that these topics are addressed in this SEIR):

- Land Use and Planning
- Population and Housing
- Aesthetics and Shadows
- Cultural and Historic Resources (including Paleontological and Tribal Cultural Resources)
- Public Services (including Recreation)
- Transportation and Circulation
- Utilities and Infrastructure (including Hydrology and Water Quality)
- Noise and Vibration
- Air Quality
- Climate Change (Greenhouse Gas Emissions, Energy and Sea Level Rise)
- Hazards and Hazardous Materials
- Biological Resources
- Geology and Soils

¹ The Notice of Preparation (NOP) is a CEQA-required brief notice sent by the Lead Agency to notify the Responsible Agencies, Trustee Agencies, potentially involved federal agencies, and other interested parties requesting notice, that the Lead Agency plans to prepare an EIR or SEIR for a project; the NOP solicits guidance regarding EIR or SEIR scope and content. The City's NOP for the proposed DTPP Plan-Wide Amendments, which was released September 14, 2021, is included in Appendix A of this SEIR. In addition, a public scoping meeting, noticed in the NOP, was held on September 21, 2021 pursuant to CEQA Guidelines section 15082(c) (Notice of Preparation and Determination of Scope of EIR) to solicit comments regarding the appropriate scope and content of the SEIR.

1.6 SEIR Organization and Content

The impact and mitigation information in this SEIR is generally organized under the 13 headings listed in *Section 1.5* above. The report describes the following in chapters 4 through 16 for each respective impact category:

1. The **existing environmental setting**, focusing on any changes in environmental conditions which may have occurred since the DTPP Final EIR was prepared;
2. The **regulatory setting** – including any changes to plans and policies, such as a land use or regulatory plan, or other regional or local plans, codes, and adopted documents that would be pertinent to the project - plus any changes in the regulatory setting since the DTPP Final EIR was prepared;
3. Any new **supplemental impact findings**, including impacts which may have changed due to new information, changed circumstances, or changes in the project, and therefore were not considered in the previous CEQA documents; and
4. Any **supplemental mitigation measures** to avoid or reduce impact changes or new impacts not identified in the previous CEQA documents.

In addition, this SEIR includes a chapter evaluating cumulative environmental impacts (Chapter 17); a chapter summarizing the SEIR information in terms of various CEQA-required assessment conclusions, including growth-inducing effects, significant unavoidable impacts, irreversible environmental changes, and effects found not to be significant (Chapter 18); and an explanation of alternatives to the proposed project (Chapter 19); in keeping with CEQA Guidelines section 21081.6.

1.7 “Significant Impacts” and Other Key SEIR Terminology

This SEIR identifies those adverse environmental impacts that are expected to be “significant,” and corresponding mitigation measures warranted to eliminate or reduce those impacts to “less-than-significant” levels. Where it is determined that a particular impact cannot be mitigated to a less-than-significant level, the SEIR identifies that impact as “unavoidable.” (see *Section 18.2, Significant Unavoidable Impacts*). Identified significant impacts that are not listed in *Section 18.2, Significant and Unavoidable Impacts*, can be mitigated to a less-than-significant level by implementation of the associated mitigation measure(s) identified in this SEIR. The individual environmental topic chapters provide more detail.

CEQA Guidelines section 15130 mandates that an EIR consider and discuss the cumulative impacts of a project when the project’s incremental effect is cumulatively considerable. A cumulative impact is the result of the combination of the impacts resulting from the project together with other projects causing related impacts. (see *Chapter 17, Cumulative Impacts*).

The particular SEIR terms noted above (“significant,” “unavoidable,” “mitigation,” “cumulative”) and other key CEQA terminology used in this EIR are defined below.

- **Significant Impact.** “Significant effect on the environment” (significant impact) means, “...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 and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.” (CEQA Guidelines, section 15382)
- **Cumulative Impacts.** “Cumulative impacts” are defined as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. 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. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.” (CEQA Guidelines, sections 15355[a] and [b])
- **Significant Unavoidable Impact.** “Significant unavoidable impact” is defined as a significant adverse environmental impact for which either no mitigation or only partial mitigation is feasible. If the project is to be approved without imposing an alternative design, the Lead Agency must include in the record of the project approval a written statement of the specific reasons to support its action - i.e., a “statement of overriding considerations.” (CEQA Guidelines, sections 15126.2[c] and 15093[b])
- **Significance Criteria.** The criteria used in this EIR to determine whether an impact is or is not “significant” are based on: (a) CEQA-defined “mandatory findings of significance” – i.e., where any of the specific conditions occur under which the Legislature and the Secretary of Resources have determined constitute a potentially significant effect on the environment, which are listed in CEQA Guidelines section 15065; (b) specific criteria that a Resources Agency has determined are “normally” considered to constitute a “significant effect on the environment”; (c) the relationship of the project effect to the adopted policies, ordinances, and standards of the Lead Agency and of responsible agencies; and/or (d) commonly accepted practice and the professional judgment of the EIR authors and Lead Agency staff.
- **Mitigation Measure.** For each significant impact, the EIR must identify a specific “mitigation” measure or set of measures capable of “(a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (d) reducing or eliminating the impact over time by preservation or maintenance operations during the life of the action; or (e) compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.” (CEQA Guidelines, section 15370)

1.8 Intended Uses of the SEIR

The City is the Lead Agency² for all environmental documentation and procedural requirements associated with the proposed DTPP Plan-Wide Amendments. This SEIR has been prepared by the

² The CEQA Guidelines define the “Lead Agency” as the public agency that has the principal responsibility for carrying out or approving a project. (CEQA Guidelines, section 15367)

City in keeping with State environmental documentation requirements set forth in the CEQA statute and CEQA Guidelines. The report is intended to inform City decision-makers, other responsible agencies, and the general public of the proposed DTPP Plan-Wide Amendments changes and of the environmental consequences of their approval. The scope of this SEIR is intentionally limited to evaluation and discussion of the environmental implications of these changes. The SEIR is not intended to address the merits of, or the economic or social impacts of, the DTPP Plan-Wide Amendments.

The CEQA Guidelines stipulate that an SEIR is intended to serve as a public information and disclosure document identifying those environmental impacts associated with the proposed project changes that are expected to be significant, and describing mitigation measures and alternatives that could minimize or eliminate these significant adverse impacts.³ Such impacts and mitigation needs are discussed in this SEIR to the level of detail necessary to allow reasoned decisions about the project and conditions of project approval.

As described above and detailed in Chapter 3 of this SEIR, the proposed DTPP Plan-Wide Amendments include revising certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation (including pedestrian, bicycle, and vehicular circulation); building placement; building height and massing; parking requirements; and historical resources within the DTPP area. Therefore, the City has determined that a program-level SEIR is appropriate. Like the programmatic DTPP Final EIR certified in 2011, this program SEIR analyzes General Plan and DTPP Plan-Wide Amendments that would, if adopted, govern future development in the DTPP area. Future proposals, such as the development of Gatekeeper Projects may be subject to separate project-level CEQA review or may be examined in light of the program SEIR to determine whether additional environmental review is required. The City anticipates using a checklist or similar device to determine whether the environmental effects of future development proposals are within the scope of the program SEIR, as described in CEQA Guidelines section 15168(c)(2), or further review is required.

As the Lead Agency, the City also intends for this SEIR to serve as the CEQA-required environmental documentation for consideration of this project by Responsible Agencies⁴ and Trustee Agencies⁵ (see “Other Government Agency Approvals” in Chapter 3, *Project Description*, of this SEIR).

³ CEQA Guidelines, section 15121(a).

⁴ Under CEQA Guidelines, the term “Responsible Agency” includes all public agencies, other than the Lead Agency, which have discretionary approval authority over aspects of the project for which the Lead Agency has prepared an EIR.

⁵ Under CEQA Guidelines, the term “Trustee Agency” means a state agency having jurisdiction by law over natural resources affected by the project which are held in trust by the people of California. (CEQA Guidelines Section 15385.) The only Trustee Agencies in California are the California Department of Fish and Wildlife (CDFW), State Lands Commission, California Department of Parks and Recreation, and (in limited circumstances) the University of California.

CHAPTER 2

Executive Summary

This SEIR chapter includes: (1) a summary description of the proposed Downtown Precise Plan (DTPP) Plan-Wide amendments; (2) a summary description of the approvals required to implement the project; (3) a summary list of related environmental issues (areas of controversy); (4) a summary of significant supplemental environmental impact and mitigation findings of this SEIR resulting from project implementation, and any impacts and mitigations from the certified DTPP Final EIR that apply to the project; (5) a summary of SEIR-identified alternatives to the proposed DTPP amendments; and (6) a summary of how the SEIR-identified mitigation measures would be implemented.

This summary should not be relied upon for a thorough understanding of the proposed DTPP Plan-Wide Amendments or its associated impacts and mitigation needs. Please refer to Chapters 3 through 19 of this SEIR for a more complete description of the proposed DTPP Plan-Wide Amendments, associated impacts and mitigation measures, and alternatives.

2.1 Project Overview

The proposed DTPP Plan-Wide Amendments would revise certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation; building placement; minimum building height and massing; parking; historical resources; and open space. The proposed amendments are informed by the so-called Gatekeeper Projects—six individual development projects with applications on file the City—and are intended to make policy changes in advance of consideration of these projects to ensure they conform to the City’s vision for the development of the Downtown. To help ensure this conformance, the proposed DTPP Plan-Wide Amendments would require City Council approval of any Large Project requesting a General Plan Amendment and that the applicant for any such project negotiate a Development Agreement with the City.

This SEIR also evaluates a potential future extension of the northern DTPP area boundary between El Camino Real and the Caltrain tracks to accommodate one of the six Gatekeeper Projects; amendment of the maximum allowable development cap for office development to add 80,000 square feet specifically reserved for small office projects (those of 20,000 net new square feet or less); and the potential for further additional office development (total of 1,167,100 square feet, including the 80,000 square feet for small offices) and residential development (830 units) in the DTPP area. No change is proposed to retail or lodging development potential, as both uses have unused development capacity in the DTPP.

Potential changes to the DTPP land use controls would include, but not necessarily be limited to:

- Potential addition, as a conditionally permitted use, of Research and Development (R&D) Laboratory Type, within the Downtown General district;
- Revisions to the DTPP New Streets (Circulation) Regulations and maps to reflect realignment, relocation, closure, vacation, and/or revised typology of certain streets;
- Allowance for exceptions to standards regarding building placement, minimum height, and stepdown zones for sites providing privately owned publicly accessible open space and sites constrained by potential Caltrain track realignment or creek/stormwater features;
- Reducing the vehicle parking requirement and increasing the bicycle requirement to reflect anticipated reduced future parking demand;
- Allowance of rooftop structures supporting active, recreational rooftop uses; and
- Removal of Little River Park and the County Parklet as open spaces while adding Roselli Mini Park (existing) and adding Library Lot A as a potential new open space, as well as adding three open spaces planned as part of Gatekeeper projects at 901 El Camino Real, 1900 Broadway, and 2300 Broadway.

2.2 Required Approvals

2.2.1 City of Redwood City

The proposed DTPP Plan-Wide Amendments would require the following discretionary approvals by the City of Redwood City:

- Certification of the Final SEIR
- Adoption of a Mitigation Monitoring or Reporting Program
- Adoption of General Plan amendments to implement the DTPP Plan-Wide Amendments (other than the currently proposed amendment of the DTPP maximum allowable development to add 80,000 square feet of office capacity specifically reserved for small offices, revision of the maximum allowable development caps would be considered as part of subsequent project-specific reviews)
- Adoption of DTPP amendments, including, but not necessarily limited to, the following:
 - Amendments to permitted uses including, but not necessarily limited to, allowing Research and Development Laboratory space as a conditional use;
 - Amendments to height and massing regulations, including allowing rooftop structures that support active, recreational rooftop uses (but no changes to the permitted maximum building height);
 - Amendment of the maximum allowable development cap for office development to add 80,000 square feet specifically reserved for small office projects (of 20,000 net new square feet or less);
 - Revisions to the DTPP New Streets (Circulation) Regulations and associated revisions to DTPP maps, as well as to update the typology of some streets and, potentially, eliminate some planned but unbuilt streets;

- Revisions to certain of the DTPP parking regulations, to lower the parking requirement to reflect actual demand, current best practices, and future plans for Caltrain track expansion that will encourage non-driving modes of transportation while continuing to incentivize shared parking, and to increase bicycle parking requirements; and
- Allowance for exceptions to mandatory building placement, stepdown zone, and minimum building height standards in the DTPP Development Regulations for sites identified as potentially providing privately owned publicly accessible open space that is identified on the Potential Public Open Space Map in DTPP Section 3.2.1 and for sites that are constrained by potential anticipated Caltrain track improvements and realignment, as identified on the Potential Transit Projects Map (DTPP Section 3.2.3), or physically constrained by creek or stormwater features as identified on the Potential Public Open Space Map (Section 3.2.1).
- Vacation, closure and realignment of City streets and parklets, and provide zoning and standards for the closed streets, where necessary.
- Subsequent project specific entitlements, including, but not limited to Precise Plan Permits, Tentative Tract Maps, Architectural Permits, Development Agreements, and, potentially, additional General Plan and DTPP amendments and, where applicable, Zoning Map revisions.

2.2.2 Other Government Agency Approvals

Amendment of the General Plan and DTPP to implement the DTPP Plan-Wide Amendments is not anticipated to require review and/or approval from other jurisdictional agencies, with the potential exception of circulation improvements and, in connection with one of the Gatekeeper projects that is proposing alteration of Arroyo Ojo, a small creek that is largely culverted, project-specific approval by one or more resource agencies, potentially including the San Francisco Bay Regional Water Quality Control Board, U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and/or the U.S. Department of Fish and Wildlife. Additionally, the amendments would require review by City/County Association of Governments of San Mateo County with respect to a determination of consistency with the Airport Land Use Compatibility Plan for the San Carlos Airport.

2.3 Environmental Issues (Areas of Controversy)

As required by the CEQA Guidelines, this SEIR addresses the following areas of potential environmental impact or controversy known to the Lead Agency (the City), including those issues and concerns identified by the City in its Notice of Preparation (NOP) of this EIR (dated September 14, 2021)¹ and by other agencies, organizations, and individuals in response to the NOP. Specific environmental concerns and the chapters of this SEIR that they relate to are

¹ The Notice of Preparation (NOP) is a CEQA-required brief notice sent by the Lead Agency to notify the Responsible Agencies, Trustee Agencies, potentially involved federal agencies, and other interested parties requesting notice, that the Lead Agency plans to prepare an EIR or SEIR for a project; the NOP solicits guidance regarding EIR or SEIR scope and content. The City's NOP for the proposed DTPP-Wide Plan Amendments, which was released September 14, 2021, is included in Appendix A of this SEIR. In addition, a public scoping meeting, noticed in the NOP, was held on September 21, 2021, pursuant to CEQA Guidelines Section 15082(c) (Notice of Preparation and Determination of Scope of EIR) to solicit comments regarding the appropriate scope and content of the SEIR.

summarized below (listed in the order that they are addressed in this SEIR; summary text is provided by the SEIR authors, but full NOP responses text is included in Appendix A):

- *Land Use and Planning (Chapter 4)*²
 - Current DTPP must be followed or revised in accordance with current law;
 - Reconsider a project with over 2 million square feet of development given unknowns regarding Caltrain;
 - Need additional community outreach and improved survey prior to advancing current proposed increases in development;
 - Do not increase development at all above what was already approved in the DTPP;
 - Consider a plan that involves all or nearly-all affordable housing instead of expansion of office space;
 - Concern about intensity and height of office space proposed; should be more residential, including affordable units (jobs/housing imbalance);
 - Reconsider amount of proposed office space to reflect shifts in demand for office due to COVID-19 pandemic;
 - Include alternative(s) with less or no office development; and
 - Support for transit-oriented development and creation of a dynamic urban core.
- *Population and Housing (Chapter 5)*
 - (see comments above in Land Use and Planning related to jobs/housing balance and residential density)
- *Cultural and Historic Resources (including Paleontological and Tribal Cultural Resources) (Chapter 7)*
 - Comply with Senate Bill (SB) 18 and Assembly Bill (AB) 52 with respect to tribal consultation requirements.
- *Transportation and Circulation (Chapter 9)*
 - Apply screening criteria established in the City’s adopted vehicle miles traveled (VMT) policy to determine whether there may be a significant effect on the environment;
 - Conduct a detailed VMT analysis if the proposed DTPP Plan-Wide Amendments do not meet the screening criteria;
 - Include an illustration of walking, biking, and auto conditions at the project site and study area roadways;
 - Analyze primary and secondary effects on pedestrians, bicycles, travelers with disabilities, and transit performance;

² Some of the comments in this category address the merits of the proposed project or process-related issues; they are included here under the overall “catch-all” category of Planning.

- Include a robust Transportation Demand Management (TDM) plan to reduce VMT and other impacts to transportation and circulation;
- Follow Caltrans' Transportation Impact Study Guide when evaluating transportation impacts;
- Identify transportation impact fees needed to provide fair share contributions toward multi-modal and regional transit improvements;
- Encroachment permits from Caltrans are required for any work conducted in the Caltrans right-of-way;
- Continue coordination with Caltrans, California High-Speed Rail Authority, SamTrans, and Caltrain
- *Utilities and Infrastructure (including Hydrology and Water Quality) (Chapter 10)*
 - Concern about the City's water supply and its ability to meet demand of proposed increase in development.
 - General concern about the City's infrastructure and its ability to meet demand of proposed increase in development
 - Consider saltwater infiltration due to sea level rise with global warming
- *Air Quality (Chapter 12)*
 - Do not approve new development unless it can achieve net-zero carbon emissions.
- *Climate Change (Greenhouse Gas Emissions, Energy and Sea Level Rise) (Chapter 13)*
 - (see comment above in *Air Quality* related to emissions, and in *Utilities and Infrastructure* related to saltwater infiltration due to sea level rise)
- *Geology and Soils (Chapter 16)*
 - Concern that contaminated soil at Sequoia Station may be encountered once excavation to the depth required to support taller buildings is conducted.

2.4 Summary of SEIR Impacts and Mitigation Measures

For each of the 13 environmental topics listed above, any new significant, or substantially more severe significant, project or cumulative impacts impact and associated mitigation measure(s) identified in this SEIR plus any significant project or cumulative impact and associated mitigation measure(s) identified in the DTPP Final EIR that remain applicable to the proposed DTPP Plan-Wide Plan Amendments are summarized in **Table 2-1**. The summary table has been organized to correspond with the more detailed impact and mitigation discussions in Chapters 4 through 16 of this SEIR. The table is arranged in five columns: (1) identified impacts, (2) potential significance without mitigation, (3) recommended mitigation measures, (4) the entity responsible for implementing each mitigation measure, and (5) the level of impact significance after implementation of the mitigation measure(s).

Any future development project considered for approval would be subject to all applicable mitigation measures identified in this SEIR.

As a result of the California Supreme Court's decision with respect to impacts of the environment on a project, two potential non-CEQA impacts discussed in the prior DTPP Final EIR related to Noise and Vibration are not further addressed in this SEIR. However, the City would continue to enforce the prior mitigation measures with clarifying edits as conditions of approval:

Condition of Approval 11a: Noise Reduction Measures for Multifamily Housing

The City shall require noise studies consistent with the requirements of the California Building Code to be conducted for proposed new multifamily residential projects within the amended DTPP area to identify noise reduction measures necessary to achieve compatibility with City Noise Element guidelines (55 dBA CNEL at sensitive exterior spaces) and Title 24 standards (45 dBA CNEL within residential units). Each noise study must be approved by the City's Building Inspection Division prior to issuance of a building permit. Identified noise reduction measures, in order of preference so that windows can be opened, may include:

- Site and building design so as to minimize noise in shared residential outdoor activity areas by locating such areas behind the buildings, in courtyards, or orienting the terraces toward the interior of lots rather than streets;
- Site and building design so as to minimize noise in the most intensively occupied and noise-sensitive interior spaces of units, such as bedrooms, by placing such interior spaced and their windows and other openings in locations with less noise exposure;
- Windows and doors with a high Sound Transmission Class (STC) rating and noise-attenuating wall assemblies;
- Forced air mechanical ventilation systems in all units exposed to noise level exceeding Title 24 standards to allow residents the option of reducing noise by keeping the windows closed.

Condition of Approval 11b: Groundborne Vibration Measures for Habitable Buildings

The City shall require a detailed site-specific vibration study prior to development of new habitable buildings within 100 feet of the Caltrain or California High Speed Rail right-of-way. The study shall demonstrate that groundborne vibrations associated with rail operations either would not exceed applicable FTA groundborne vibration impact criteria, or can be reduced to below the applicable FTA criteria thresholds through building design and construction measures (e.g. stiffened floors, modified foundations), which shall be required as conditions of permit approval.

**TABLE 2-1
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Aesthetics and Shadow				
<p>Impact AE-5: Implementation of the DTPP Plan-Wide Amendments would not cast shadow that would substantially impair the beneficial use, important values, or livability of any shadow-sensitive use, including public parks, plazas or open space areas; buildings using passive solar heat collection or solar collectors; historic resources with a shadow-sensitive character-defining feature; or shadow-sensitive portions of residential parcels.</p>	S	<p>Mitigation AE-5: Shadow Study for Exceptions to Building Placement and/or Building Height and Disposition Regulations: Project applicants seeking exceptions to building placement and/or building height and disposition regulations in the DTPP such as exceptions to a build-to-corner, building setback, frontage coverage, height stepdown, or any other building placement or height or disposition regulation that would allow greater building massing than would otherwise be permitted shall demonstrate to the Redwood City Planning Services Division that the exceptions sought would be consistent with section 2.7.5 of the DTPP and would not result in shadow exceeding 50 percent on the shadow-sensitive uses and spaces identified therein at noon on the Spring Equinox, except that this requirement shall not apply to Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights if the parcel(s) with lower height limits are the site of development subsequent to DTPP adoption.</p>	Project Applicant, City	LS
Cultural and Historic Resources				
<p>Impact CR-1: Implementation of the DTPP Plan-Wide Amendments would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.</p>	S	<p>Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments): For any discretionary project involving an amended DTPP area that contains a historic resource, including the seven properties which the DTPP identifies as historic properties which may be altered, relocated or removed, the City shall make a preliminary determination as to whether or not the project may have a potentially significant adverse effect on the historic resource. If the City determines that the project may have a potentially significant effect, the City shall require the applicant to implement, to the extent feasible, the following mitigation measures.</p> <p>a) If feasible, the applicant shall, to City satisfaction, ensure that the project adheres to one or both of the following standards:</p> <ul style="list-style-type: none"> • Secretary of Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings; or • Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer, 1995). <p>The project shall be reviewed by a qualified architect or architectural historian approved by the City and meeting the Secretary of the Interior's Professional Qualifications Standards published in the Code of Federal Regulations</p>	Project Applicant, qualified architect or architectural historian, City Historic Resources Advisory Committee	SU

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Cultural and Historic Resources (cont.)				
Impact CR-1 (cont.)		<p>(36 CFR part 61), who shall make a recommendation to the City's Historic Resources Advisory Committee as to whether the project fully adheres to the Secretary Standards for Rehabilitation, as well as to whether any specific modifications are necessary to do so. The final determination as to a project's adherence to the Standards for Rehabilitation shall be made by the Historic Resources Advisory Commission or the body with final decision-making authority over the project.</p> <p>b) If measure (a) is not feasible, and if relocation of the historic resource is a feasible alternative to demolition, the historic resource shall be moved to a new location compatible with the original character and use of the historical resource, and its historic features and compatibility in orientation, setting, and general environment shall be retained, such that the resource retains its eligibility for listing on the California Register.</p> <p>If neither measure (a) nor measure (b) is feasible, the City shall, as applicable and to the extent feasible, implement the following measures in the following order:</p> <p>c) Document the historic resource before any changes that would cause a loss of integrity and loss of continued eligibility. The documentation shall adhere to the Secretary of the Interior's Standards for Architectural and Engineering Documentation. The level of documentation shall be proportionate with the level of significance of the resource. The documentation shall be made available for inclusion in the Historic American Building Survey (HABS) or the Historic American Engineering Record (HAER) Collections in the Library of Congress, the California Historical Resources Information System and the Bancroft Library, as well as local libraries and historical societies, such as the Redwood City Public Library.</p> <p>d) Retain and reuse the historic resource to the maximum feasible extent and continue to apply the Standards for Rehabilitation to the maximum feasible extent in all alterations, additions and new construction.</p> <p>e) Through careful methods of planned deconstruction to avoid damage and loss, salvage character-defining features and materials for educational and interpretive use on-site, or for reuse in new construction on the site in a way that commemorates their original use and significance.</p> <p>f) Interpret the historical significance of the resource through a permanent exhibit or program in a publicly accessible location on the site or elsewhere within the DPP area.</p>		

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Cultural and Historic Resources (cont.)				
Impact CR-1 (cont.)		Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments): The Project Applicant for each subsequent development project that requires a discretionary approval and that is adjacent to a historic resource shall engage a qualified architect or architectural historian approved by the City and meeting the Secretary of the Interior's Professional Qualifications Standards (36 CFR part 61) and by the City's Historic Resources Advisory Committee to review the proposed development for its potential impacts on the adjacent historic resource. Any site and architectural design modifications identified through this review process as necessary to avoid a "substantial adverse change" in the significance of the adjacent historic resource and protect its continued eligibility for listing on the California Register, as determined by the City, shall be required of the Project Applicant as conditions of project approval.	Project Applicant, qualified architect or architectural historian, City Historic Resources Advisory Committee	SU
		Implement Mitigation Measure NO-3.	Project Applicant, construction contractor, City	
Impact CR-2: Implementation of the DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	S	<p>Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments): Implementation of the following mitigation measures would reduce the potential impacts of new development facilitated by the DTPP Plan-Wide Amendments on undiscovered archeological resources to a less-than-significant level:</p> <p>a) In the event that any deposit of prehistoric or historic archaeological materials is encountered during project construction activities, the construction contract shall ensure that all work within an appropriate buffer area around the discovery, but not less than 50 feet, shall be stopped and a qualified archaeologist meeting federal criteria under 36 CFR 61 shall be contacted to assess the find(s) and make recommendations. The project applicant(s) shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond those that are scientifically important, are considered.</p> <p>In the event prehistoric or historic archaeological materials cannot be avoided by project activities, the City Community Development and Transportation Department shall confirm that the project applicant has retained a qualified archaeologist to evaluate the potential historic significance of the find(s). All archaeological material unearthed by project construction activities shall be evaluated by the qualified archaeologist. If the find(s) are determined to not be a historical resource pursuant to CEQA Guidelines Section 15064.5(a) or a unique archaeological resources pursuant to Public Resources Code Section 21083.2(g) by a qualified archaeologist, and was not identified as a tribal cultural resource by a Native American representative, avoidance is not necessary. If</p>	City Community Development and Transportation Department, qualified archaeologist, construction contractor	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Cultural and Historic Resources (cont.)				
Impact CR-2 (cont.)		<p>the find(s) are determined by the qualified archaeologist to be a historical resource or a unique archaeological resource, the resources shall be avoided if feasible. If the City determines that avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the qualified archaeologist, in coordination with the City Community Development and Transportation Department, the project applicant, and in accordance with CEQA Guidelines Section 15126.4 (b)(3)(C), which requires the preparation and implementation of a data recovery plan.</p> <p>The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archaeological materials and include recommendations for the treatment of these resources. In-place preservation of the archaeological resource is the preferred manner of mitigating potential impacts, as it maintains the relationship between the resource and the archaeological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource. The City Community Development and Transportation Department shall confirm that the project applicant(s) have retained a qualified archaeologist for the preparation and implementation of the data recovery plan, which shall be conducted prior to any additional earth-moving activities in the area of the resource. The recovery plan shall be submitted to the project applicant, the City Community Development and Transportation Department. Once the recovery plan is reviewed and approved by the City Community Development and Transportation Department and any appropriate resource recovery completed, project construction activity within the area of the find may resume. A data recovery plan shall not be required for resources that have been deemed by the qualified archaeologist, in coordination with the City, as adequately recorded and recovered by studies already completed as per CEQA Guidelines Section 15126.4 (b)(3)(D). The qualified archaeologist shall determine the need for archaeological construction monitoring in the vicinity of the find thereafter.</p> <p>b) Prior to the issuance of grading permits within the amended DTPP area, the City Community Development and Transportation Department shall confirm that any development applicant has required all construction crews to undergo training for the identified of federal or state-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological resources within the amended DTPP area, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work. All future individual development projects proposed in the amended DTPP area will be subject to applicable CEQA review and evaluation requirements, and to the extent that such projects are found to have the potential to disturb or destroy archaeological resources, appropriate mitigation measures would be required to address any identified significant impacts.</p>		

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Cultural and Historic Resources (cont.)				
<p>Impact CR-4: Implementation of the DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.</p>	S	<p>Implement Mitigation Measure CR-3.</p>	<p>City Community Development and Transportation Department (CD&TD), qualified archaeologist, construction contractor</p>	LS
<p>Impact C-CR-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would potentially result in significant cumulative impacts related to cultural, historic, and tribal cultural resources.</p>	S	<p>Implement Mitigation Measures CR-1, CR-2, CR-3, and NO-3.</p>	<p>Project Applicant, qualified architect or architectural historian, City Historic Resources Advisory Committee, construction contractor, City CD&TD</p>	SU (historical resources)
Utilities and Infrastructure				
<p>Impact UT-1: Implementation of the DTPP Plan-Wide Amendments would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.</p>	S	<p>Mitigation Measure UT-1a: Emergency Water Storage: All subsequent development projects in the amended DTPP area, regardless of size, shall pay a fair-share contribution towards the cost of providing emergency water storage for all proposed uses to fund the design and construction of such storage. City staff would determine the fair share contribution based on a ratio of each project's equivalent dwelling unit demand for emergency water storage compared to the total demand.</p> <p>Mitigation Measure UT-1b: Water System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing water mains have sufficient pressure and flow for the project's demands (including but not limited to domestic and fire demands). To the extent such infrastructure is not already within a capital improvement program, any water system capacity-enhancing improvements needed to provide sufficient pressure and flow to meet the project's demands shall be funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's</p>	<p>Project Applicant, City</p>	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Utilities and Infrastructure (cont.)				
Impact UT-1 (cont.)		<p>subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.</p> <p>Mitigation Measure UT-1c: Sanitary Sewer System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing sewer mains have sufficient capacity for the project's demands. To the extent such infrastructure is not already within a capital improvement program, any sewer main(s) shown to have insufficient capacity pursuant to the City's Engineering Standards shall lead to sewer system capacity-enhancing improvements funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.</p> <p>Mitigation Measure UT-1d: Stormwater System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing stormwater system has sufficient capacity for the project's demands. To the extent such infrastructure is not already within a capital improvement program, any stormwater main(s) shown to have insufficient capacity pursuant to the City's Engineering Standards shall lead to stormwater system capacity-enhancing improvements funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay</p>		

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Utilities and Infrastructure (cont.)				
Impact UT-1 (cont.)		a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.		
Impact UT-2: Implementation of the DTPP Plan-wide amendments would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	S	Mitigation Measure UT-2: Recycled Water Infrastructure: The developer of all subsequent development projects in the amended DTPP area, regardless of size, shall be required to install an extension of recycled water supply pipelines to each development project with sufficient recycled water capacity to provide for all of the project's recycled water demands while achieving the required pressure, flow, and other design criteria of recycled water system pursuant to City of Redwood City standards. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.	Project Applicant, City	LS
Impact UT-8: Implementation of the DTPP Plan-Wide Amendments would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; (iv) impede or redirect flood flows.	S	Mitigation Measure UT-8: Should the proposed realignment and alteration of Arroyo Ojo be undertaken, the City would require the project applicant to develop 2 acre-feet of detention storage on the project site to reduce water levels upstream and peak flows downstream of the 901 El Camino Real project site to achieve a 30-year level of service. The volume of detention reflects the volume of stormwater flow that would be spilled from existing on-site facilities and stored in the existing street network.	Project Applicant, City	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Utilities and Infrastructure (cont.)				
<p>Impact C-UT-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity and Citywide, would not contribute considerably to cumulative impacts on utilities and service systems.</p>	S	<p>Implement Mitigation Measures UT-1 and UT-2</p>	Project Applicant, City	LS
Noise				
<p>Impact NO-1: Implementation of the DTPP Plan-Wide Amendments would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.</p>	S	<p>Mitigation Measure NO-1: Construction Noise Reduction (formerly Mitigation Measure 11-4 from the DTPP Final EIR): Reduce demolition and construction noise impacts on adjacent uses by imposing conditions of approval on all future projects involving demolition and construction activities, which conditions shall require the Project Applicant to undertake the following conventional construction-period noise abatement measures:</p> <ul style="list-style-type: none"> • <i>Construction Plan.</i> Prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with nearby noise-sensitive facilities so that construction activities and the event schedule can be scheduled to minimize noise disturbance. This plan shall be provided to all noise-sensitive land uses within 500 feet of the construction site. • <i>Construction Scheduling.</i> Ensure that noise-generating construction activity is limited to between the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday, except when authorized by the Building Official (Redwood City Municipal Code Section 24.32). (Redwood City Municipal Code Section 24.30) • <i>Construction Equipment Mufflers and Maintenance.</i> Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment • <i>Equipment Locations.</i> Locate stationary noise-generating equipment required on construction project sites as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project site. • <i>Construction Traffic.</i> Route all construction traffic to and from the construction sites via designated truck routes to the maximum extent feasible. Prohibit construction-related heavy truck traffic in residential areas where feasible. 	Project Applicant, City	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Noise (cont.)				
Impact NO-1 (cont.)		<ul style="list-style-type: none"> • <i>Quiet Equipment Selection.</i> Use quiet construction equipment, particularly air compressors, wherever feasible. • <i>Temporary Barriers.</i> Construct solid plywood fences around construction sites adjacent to residences, operational businesses, or noise-sensitive land uses. • <i>Temporary Noise Blankets.</i> Temporary noise control blanket barriers shall be erected along building facades of construction sites to attenuate noise from elevated activities if noise conflicts cannot be resolved by scheduling. (Noise control blanket barriers can be rented and quickly erected.) • <i>Noise Disturbance Coordinator.</i> For projects that would last over one year in duration, the City may choose to require the Project Applicant to 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 complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. The Project Applicant shall post, in a conspicuous location, a telephone number for the Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. (The Noise Disturbance Coordinator shall work directly with an assigned City staff member.) 		
Impact NO-2: Implementation of the DTPP Plan-Wide Amendments would not generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	S	<p>Mitigation Measure NO-2: Operational Noise Performance Standard</p> <p>Prior to the issuance of any building permit, future project applicants within the amended DTPP area shall ensure that all mechanical equipment is selected and designed to reduce impacts on surrounding uses by meeting the performance standards of Chapters 36.7.B of the Redwood City Zoning Code, limiting noise from stationary sources such as mechanical equipment to 55 dBA at the property lines. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance has been verified by the City. Methods of achieving these standards include, but are not limited to, using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses.</p> <p>Project applicants shall submit an acoustical study prepared by a qualified acoustical engineer during final building design that evaluates the potential noise generated by building mechanical equipment and to identify the necessary design measures to be incorporated to meet the City's standards. The study shall be submitted to the Community Development and Transportation Department for review and approval before the issuance of any building permit.</p>	Project Applicant, qualified acoustical engineer, City	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Noise (cont.)				
<p>Impact NO-3: Implementation of the DTPP Plan-Wide Amendments would not generate excessive groundborne vibration or groundborne noise levels.</p>	S	<p>Mitigation Measure NO-3: Vibration Reduction (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments): The City shall reduce ground-borne vibration levels that may be generated by future site-specific demolition and construction activities by imposing conditions of approval on all future projects involving demolition and construction activities, which conditions shall require the Project Applicant to ensure the following ground-borne vibration abatement measures are implemented by the construction contractor:</p> <ul style="list-style-type: none"> • Restrict vibration-generating activity to between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, except when authorized by the Building Official (Redwood City Municipal Code Section 24.32). • Notify occupants of land uses located within 200 feet of pile-driving activities of the project construction schedule in writing. • Investigate in consultation with City staff possible pre-drilling of pile holes as a means of minimizing the number of percussions required to seat the pile. • Conduct a pre-construction site survey documenting the condition of any historic structure located within 200 feet of pile driving activities. • Monitor pile driving vibration levels to ensure vibration does not exceed appropriate thresholds for the building (5 mm/sec (0.20 inches/sec) ppv for structurally sound buildings and 2 mm/sec (0.08 inches/sec) ppv for historic buildings. 	Project Applicant, construction contractor(s), City	LS
Air Quality				
<p>Impact AQ-2: Implementation of the DTPP Plan-Wide Amendments would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.</p>	S	<p>Mitigation Measure AQ-2a: Best Management Practices for Construction Dust Suppression.</p> <p>All subsequent projects, regardless of size, shall implement best management practices to reduce construction impacts, particularly fugitive dust, to a less-than-significant level.</p> <p>Specifically, the project applicant shall require all construction plans to specify implementation of the following best management practices:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 	Project Applicant, construction contractor(s)	SU

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Air Quality (cont.)				
Impact AQ-2 (cont.)		<ul style="list-style-type: none"> • 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 mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 		
	S	<p>Mitigation Measure AQ-2b: Emission Reduction Measures for Projects Exceeding the Significance Thresholds for Criteria Pollutants.</p> <p>Project applicants proposing projects that exceed BAAQMD screening levels shall prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment shall either include a comparison of the project with other similar projects where a quantitative analysis has been conducted, or shall provide a project-specific criteria air pollutant analysis to determine whether the project exceeds the BAAQMD's criteria air pollutant thresholds identified in Table 12-7.</p> <p>In the event that a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed BAAQMD significance thresholds, the project applicant shall implement the following emission reduction measures to the degree necessary to reduce the impact to less than the significance thresholds, and shall implement additional feasible measures if necessary to reduce the impact to less than the significance thresholds.</p> <p>Clean Construction Equipment</p> <p>The project applicant shall use electric construction equipment when feasible.</p> <p>The project applicant shall ensure that all diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by</p>	Project Applicant, construction contractor(s)	

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Air Quality (cont.)				
Impact AQ-2 (cont.)		<p>CARB, except as provided for in this section. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the BAAQMD as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.</p> <ul style="list-style-type: none"> The City may waive the requirement for Tier 4 Final equipment only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment. The project applicant shall require the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit. <p>Operational Emission Reductions</p> <ul style="list-style-type: none"> As required by Mitigation Measure CC-1, all project buildings shall comply with the "all electric" requirement in the City's Reach Codes in effect at the time that a building permit application is filed. As required by Mitigation Measure CC-1, projects shall provide EV charging infrastructure consistent with the City's Reach Codes or the applicable Tier 2 CALGreen standards in effect at the time that a building permit application is filed, whichever is more restrictive. 		

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Air Quality (cont.)				
Impact AQ-2 (cont.)		<ul style="list-style-type: none"> All newly constructed loading docks on commercial properties that can accommodate trucks with Transport Refrigeration Units (TRUs) shall be equipped with EV charging equipment to power TRUs during loading and unloading at docks. This measure does not apply to temporary street parking for loading or unloading. <p>Emission Offsets</p> <p>If a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed BAAQMD significance thresholds despite implementation of the above emission reduction measures, the project applicant shall pay mitigation offset fees to the BAAQMD's Bay Area Clean Air Foundation or other governmental entity. The mitigation offset fee shall fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin. The fee will be determined by the City, the project applicant, and the BAAQMD or other governmental entity, and be based on the type of projects available at the time of the payment. The fee is intended to fund emissions reduction projects to achieve annual reductions of ROG, NOX, and PM10 equal to the amount required to reduce emissions below significance levels after implementation of other emission reduction strategies identified above.</p>		
Impact AQ-3: Implementation of the proposed DTPP Plan-Wide Amendments would not expose sensitive receptors to substantial pollutant concentrations.	S	<p>Mitigation Measure AQ-3a: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Health Risks from Construction.</p> <p>Project applicants within the amended DTPP area proposing projects located, or proposed to be located within 1,000 feet of existing or approved sensitive receptor(s), as defined by the City, including those projects that would include sensitive receptor(s), shall prepare a project-level HRA of construction impacts at the time the project is proposed. This includes projects whose off-site utility improvements would occur over more than six months in duration at any given location that would be within 1,000 feet of existing or approved sensitive receptor(s). The HRA shall be based on project-specific construction schedule, equipment and activity data and shall be conducted using methods and models approved by the BAAQMD, CARB, OEHHA and U.S. EPA. Estimated project-level health risks shall be compared to the BAAQMD's health risk significance thresholds for projects.</p> <p>In the event that a project-specific HRA finds that the project could result in significant construction health risks that exceed BAAQMD significance thresholds, the project applicant shall implement Mitigation Measure AQ-2b's requirement for the use of all Tier 4 Final construction equipment to reduce project-level health risks to a less than significant level. In addition, all tower cranes and man- and material-lifts shall be electric powered and forklifts shall be electric- or LNG-powered.</p>	Project Applicant, City	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Air Quality (cont.)				
Impact AQ-3 (cont.)		<p>Mitigation Measure AQ-3b: Laboratory Emission Controls</p> <p>For any individual project that contains emissions-generating laboratory space within a “Research and Development, Laboratory” use, as defined in the Redwood City Municipal Code and located, or proposed to be located, within 1,000 feet of existing or proposed sensitive receptor(s), as defined by the City, including those projects that would include sensitive receptor(s), the project applicant shall undertake the following:</p> <ul style="list-style-type: none"> • Conduct a health risk screening analysis and obtain a permit from BAAQMD for the proposed individual projects; this permit may be required either prior to or as a condition of approval of the proposed individual project. In accordance with BAAQMD Rules 2-1 and 2-5, new sources of emissions must implement Best Available Control Technology for Toxics (T-BACT) if individual source risks exceed 1.0 in a million for cancer and/or chronic hazard index is greater than 0.20. Additionally, a permit will be denied if project cancer risk exceeds 10.0 in a million or if the chronic or acute hazard index exceeds 1.0; and • Obtain a conditional use permit from the City of Redwood City, subject to conditions such as the City may impose. Such conditions may include, but not necessarily be limited to, limitations on the materials and/or quantities of materials to be handled and/or stored on-site; implementation of emissions controls that, at a minimum, meet the BAAQMD T-BACT standard; siting constraints for laboratory uses and/or fume hoods; controls ensuring security of laboratory facilities and materials handled and stored therein; and limitations on the number of deliveries and/or the times when deliveries would be permitted. 	Project Applicant, BAAQMD	
	S	<p>Mitigation Measure AQ-3c: Design for Diesel Delivery Truck Emissions Minimization</p> <p>The project applicant for any subsequent development project that includes off-street loading facilities shall incorporate the following health risk reduction measures into the project design and construction contracts (as applicable) in order to reduce the potential health risk due to exposure to toxic air contaminant emissions from diesel trucks:</p> <ol style="list-style-type: none"> 1. Install electrical hook-ups for diesel trucks Transportation Refrigeration Units (TRU) at off-street loading docks. 2. Require trucks using off-street loading facilities to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. 	Project Applicant, City	

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Air Quality (cont.)				
Impact AQ-3 (cont.)		3. Require truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels for trucks using off-street loading facilities. 4. Prohibit trucks using off-street loading facilities from idling for more than two minutes to the extent feasible. 5. Establish truck routes to avoid sensitive receptors to the extent feasible. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.		
Impact C-AQ-1: Adoption of the proposed DTPP Plan-Wide Amendments would result in a cumulatively considerable contribution to the regional cumulative air quality impacts.	S	Implement Mitigation Measures AQ-2a and AQ-2b.	Project Applicant, construction contractor(s)	SU
Impact C-AQ-2: Adoption of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to local health risk impacts.	S	Implement Mitigation Measure AQ-3.	Project Applicant, City	LS
Climate Change				
Impact CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	S	Mitigation Measure CC-1: Enforce No Natural Gas Requirement and Require Compliance with EV Requirements in CALGreen Tier 2. Subsequent development allowed by the DTPP Plan-Wide Amendments shall comply with the "all electric" requirement in the City's Reach Codes in effect at the time that a building permit application is filed, and shall comply with EV requirements in the City's Reach Codes or the most recently adopted version of CALGreen Tier 2 at the time that a building permit application is filed, whichever is more restrictive. Subsequent development projects may qualify for exceptions to Reach Codes all-electric requirements.	Project Applicant	SU
Impact CC-2: Implementation of the proposed DTPP Plan-Wide Amendments would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	S	Implement Mitigation Measure CC-1.	Project Applicant	SU

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Climate Change (cont.)				
<p>Impact C-CC-1: Implementation of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would result in a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of greenhouse gases.</p>	S	<p>Implement Mitigation Measure CC-1.</p>	Project Applicant	SU
Biological Resources				
<p>Impact BIO-1: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p>	S	<p>Mitigation Measure BIO-1a (formerly Mitigation Measure 15-1(a) from the DTPP Final EIR). For projects in the DTPP area that adjoin Redwood Creek, the project applicant or, for any City-initiated projects, the City shall: (a) Consult with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) regarding proposed activities to determine if they could result in a "take" of a federal or State-protected species. The USFWS may presume presence or may recommend additional focused surveys to determine if any protected species are present on the site. If any special-status plant or animal species are determined to be on the property, an appropriate mitigation plan shall be developed in consultation with, and meeting the mitigation criteria of, the USFWS and the CDFW to provide for protection of such species (e.g., additional building and sidewalk setbacks from the creek top of bank, use of compatible native and noninvasive species in landscaping, changes to proposed lighting, off-site habitat replacement or enhancement).</p>	Project Applicant, City, USFWS and CDFW (if applicable)	LS
	S	<p>Mitigation Measure BIO-1b (formerly Mitigation Measure 15-3 from the DTPP Final EIR with clarifying amendments): Project Applicant shall ensure that all tree removal and trimming, as well as ground disturbing activities, are scheduled to take place outside of the breeding season (February 15 to August 31). If construction is unavoidable during this time, a qualified biologist shall conduct a survey for nesting birds no more than three days prior to the removal or trimming of any tree and prior to the start of ground disturbing activities. If active nests are not present, project activities can proceed as scheduled. If active nests of protected species are detected, a suitable buffer shall be established around the nest based on CDFW standards, and the buffer shall remain in place until the City has determined, in consultation with the qualified biologist, that the buffer is no longer necessary to avoid significant impacts to the nest.</p>	Project Applicant, qualified biologist, and CDFG (if applicable)	

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Biological Resources (cont.)				
<p>Impact BIO-2: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</p>	S	<p>Mitigation Measure BIO-2a (formerly Mitigation Measure 15-1(b) from the DTPP Final EIR with clarifying amendments): The project applicant or the City shall comply with the Redwood City Stormwater Pollution Prevention Program, including maintenance of setbacks from Redwood Creek, erosion control methods, and measures for the avoidance of stormwater pollution. The Redwood City Engineer is responsible for making the determination as to setback limits and any permitted development within a setback.</p>	Project Applicant, Redwood City Engineer	LS
	S	<p>Mitigation Measure BIO-2b (formerly Mitigation Measure 15-2 from the DTPP Final EIR with clarifying amendments): For all projects within the amended DTPP area that involve modifications to potential wetlands, riparian zones, or regulated waters, the project applicant shall obtain all required permits and approvals from the U.S. Army Corps of Engineers (ACE), the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB). All project design modifications, habitat replacement and mitigation measures required by the ACE, CDFW and RWQCB shall be incorporated into the project prior to project approval.</p>	Project Applicant	
<p>Impact BIO-3: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.</p>	S	<p>Implement Mitigation Measure BIO-2b.</p>	Project Applicant	LS
<p>Impact BIO-4: Implementation of the DTPP Plan-Wide Amendments would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.</p>	S	<p>Implement Mitigation Measure BIO-1b.</p>	Project Applicant, qualified biologist, and CDFG (if applicable)	LS
<p>Impact BIO-5: Implementation of the DTPP Plan-wide Amendments would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</p>	S	<p>Mitigation Measure BIO-5 (formerly Mitigation Measure 15-4 from the DTPP Final EIR): Any project in the DTPP area that would involve the removal of any tree shall complete the application and review process specified in the City's Tree Preservation Ordinance (Municipal Code chapter 35) prior to project approval.</p>	City, Project Applicant	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES**

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Geology and Soils				
<p>Impact GEO-2: Implementation of the DTPP Plan-Wide Amendments would not result in substantial soil erosion or the loss of topsoil.</p>	S	<p>Mitigation Measure GEO-2 (formerly Mitigation Measure 16-3 from the DTPP Final EIR, with clarifying amendments): The City shall require applicants for future development projects in the amended DTPP area involving a grading area of 10,000 or more square feet to prepare erosion control plans subject to City approval and consistent with the required project SWPPPs as well as Best Management Practices (BMPs) specified by the Redwood City Stormwater Management and Discharge Control Program (Municipal Code Chapter 27A). The plans and BMPs shall be implemented during construction. Erosion during all phases of construction shall be controlled through the use of erosion and soil transport control facilities. These shall include the use of catch basins and filter fabrics, and the direction of stormwater runoff away from disturbed areas. The plans shall also provide for long-term stabilization and maintenance of remaining exposed soils after construction is completed. Areas disturbed by construction shall be either covered with impervious surfaces (e.g., buildings and pavement) or fully stabilized with landscaping and/or native vegetation. All revegetated areas shall be irrigated and maintained as necessary to ensure the long-term survival of the vegetation. Implementation of this measure would reduce this potential impact to a less-than-significant level.</p>	City, Project Applicant	LS
<p>Impact GEO-4: Implementation of the DTPP Plan-Wide Amendments would be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2019), creating substantial direct or indirect risks to life or property.</p>	S	<p>Mitigation Measure GEO-4a (formerly Mitigation Measure 16-1 from the DTPP Final EIR, with clarifying amendments): The detailed, design-level geotechnical investigations required by the City Building Official shall include analysis of expansive soil hazards and recommend stabilization measures. Once grading plans have been developed, the actual use of expansive soils in engineered fill construction shall be further evaluated by a geotechnical engineer and the location of primary borrow source areas for fills shall be determined. Additionally, supplemental field and laboratory testing of potential cut materials shall be completed. In addition to observing all cut and fill slope construction, the project geotechnical engineer shall inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with City-approved construction specifications. If expansive soils are not fully remediated on each lot and in the area of all public and private improvements at the time of site development, the project geotechnical engineer shall make site-specific recommendations for grading, drainage installation, foundation design, the addition of soil amendments, and/or the use of imported, non-expansive fill materials, as may be required to fully mitigate the effects of weak or expansive soils and prevent future damage to project improvements. These recommendations shall be reviewed by a City-retained registered geologist and, following his or her approval, be incorporated into a report to be included with each building permit application and with the plans for all public and common area improvements. In addition, since proper drainage, in</p>	Project Applicant, project geotechnical engineer, City Building Official	LS

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

TABLE 2-1 (CONTINUED)
SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATION MEASURES

Impacts	Potential Significance without Mitigation	Mitigation Measure(s)	Mitigation Responsibility	Potential Significance with Mitigation
Geology and Soils (cont.)				
Impact GEO-4 (cont.)		particular, can improve the performance of expansive soils by significantly reducing their tendency to shrink and swell, deed restrictions shall be imposed to prohibit significant modification of finished lot grades that would adversely affect site drainage.		
Impact GEO-6: Implementation of the DTPP Plan-Wide Amendments would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	S	Mitigation Measure GEO-6 (formerly Mitigation Measure 7-5 from the DTPP Final EIR, with clarifying amendments): Prior to the issuance of grading or demolition permits, the Community Development & Transportation Department, in coordination with a qualified paleontologist, shall assess individual development project proposals within the amended DTPP area for the potential to destroy unique paleontological resources. The City's Community Development and Transportation Department shall require development proposals entailing significant earthworks or deep foundations with the potential to penetrate sedimentary rock layers to incorporate a study by a professional paleontologist to assess the potential for damage of paleontological resources. Should the paleontologist determine that the proposal has the potential to damage paleontological resources, the paleontologist shall provide detailed provisions for the protection of these resources to the City's Community Development and Transportation Department. These provisions may include the complete avoidance of the resource, in-place preservation, and/or complete data recovery as discussed in Mitigation Measure CR-2. Implementation of this measure would reduce the potential impact on paleontological resources to a less-than-significant level.	Project Applicant, qualified paleontologist, Community Development & Transportation Department	LS

SOURCE: ESA, 2022.

NOTES: S=Significant; LS = Less than Significant; SU = Significant Unavoidable

**TABLE 2-2
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR**

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Aesthetics and Shadow						
Shadow Impacts (no numbered impact statement)	No significant impact; therefore, no mitigation identified.	LS	Impact AE-5: Implementation of the DTPP Plan-Wide Amendments would not cast shadow that would substantially impair the beneficial use, important values, or livability of any shadow-sensitive use, including public parks, plazas or open space areas; buildings using passive solar heat collection or solar collectors; historic resources with a shadow-sensitive character-defining feature; or shadow-sensitive portions of residential parcels.	Mitigation AE-5: Shadow Study for Exceptions to Building Placement and/or Building Height and Disposition Regulations: Applicants seeking exceptions to building placement and/or building height and disposition regulations for increased building massing shall demonstrate consistency with DTPP section 2.7.5 of the DTPP (generally, no new shadow exceeding 50 percent on specified shadow-sensitive uses/spaces at noon on Spring Equinox.	LS	No ↑
Cultural and Historic Resources						
Impact 7-2: Impacts on historical resources (e.g., demolition, destruction, alteration, addition) Cumulative effects on historical resources	Mitigation 7-2: Stepwise mitigation: Applicant to: 1) Comply w/Secretary of the Interior's Standards if feasible; 2) Relocate resource; 3) Document resource; 4) Reuse resource as feasible; 5) Salvage character-defining features of resource; 6) Interpret significance of resource	SU	Impact CR-1: Implementation of the DTPP Plan-Wide Amendments would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. Impact C-CR-1: Cumulative effects on historical resources	Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments): Stepwise mitigation: Applicant to: 1) Comply w/Secretary of the Interior's Standards if feasible; 2) Relocate resource; 3) Document resource; 4) Reuse resource as feasible; 5) Salvage character-defining features of resource; 6) Interpret significance of resource	SU	No ↔
Impact 7-3: Impacts on historic districts.	Mitigation 7-3: Review by qualified architect or architectural historian and project modification to avoid substantial adverse change.	LS	See Impact CR-1	See Mitigation Measure CR-1	—	—
Impact 7-4: Impacts on adjacent historical resources.	Mitigation 7-4: Applicant for project adjacent to historic resource shall engage qualified architect/architectural historian to review project for impacts on adjacent resource. Design modifications identified as necessary to avoid "substantial adverse change" in significance of historic resource to be required as conditions of approval	LS	Impact CR-1: Implementation of the proposed DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments): Applicant for project adjacent to historic resource shall engage qualified architect/architectural historian to review project for impacts on adjacent resource. Design modifications identified as necessary to avoid "substantial adverse change" in significance of historic resource to be required as conditions of approval. Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments): Reduce ground-borne vibration from demolition and construction.	SU	Yes ↑

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ = No change in severity of impact from DTPP FEIR

TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Cultural and Historic Resources (cont'd.)						
Impact 7-1: Effects on archaeological resources	Mitigation 7-1: Accidental discovery: protection and avoidance of archaeological resource (stop work, consultation, avoidance if possible, evaluation, mitigation per archaeologist, data recovery).	LS	Impact CR-2: Implementation of the proposed DTPP Plan-Wide Amendments would not potentially cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments): Accidental discovery: protection and avoidance of archaeological resource (stop work; consultation; avoidance, if possible; evaluation; mitigation per archaeologist; data recovery; construction worker sensitivity training).	LS	No ↔
Not applicable. (TCRs not separately identified)	Not applicable.		Impact CR-4: Implementation of the proposed DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of a tribal cultural resource....	See Mitigation Measure CR-2 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments)	LS	—
Impact 7-5: Impacts on Paleontological Resources	Mitigation 7-5: Qualified paleontologist to assess potential impacts to paleontological resources; avoidance, in-place preservation, and/or data recovery, as applicable.	LS	Impact GEO-6: Implementation of the proposed DTPP Plan-Wide DTPP Amendments would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Mitigation Measure GEO-6 (formerly Mitigation Measure 7-5 from the DTPP Final EIR with clarifying amendments): City, in coordination with a qualified paleontologist, to assess development project for potential to destroy unique paleontological resources; avoidance, in-place preservation, and/or complete data recovery, as applicable	LS	No ↔
Public Services						
Impact 8-1: Emergency response and evacuation	Mitigation 8-1: Signal preemption (applicants pay fair share)	LS	Impact TR-4: Implementation of the proposed DTPP Plan-Wide Amendments would not result in inadequate emergency access.	No significant impact; therefore, no mitigation identified.	LS	No ↓
Transportation/Circulation						
Impacts 9-1 – 9-7 (intersection LOS) Impact 9-8 (freeway vols.) Impact 9-9 (transit capacity) Impacts 9-10 – 9-22 (cumul. intersection LOS) Impact 9-23 (cumul. fwy.) Impact 9-24 (cumul. fwy. ramps)	Various	SU or LS	Not applicable due to shift to VMT and away from LOS, as well as shift away from increased transit demand, per se, as an impact.	No significant impact; therefore, no mitigation identified.	LS	No ↓

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ - No change in severity of impact from DTPP FEIR

**TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR**

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Utilities and Infrastructure						
<p>Chapter 10. Fire Flow: Adequate fire flow can be provided through typical improvements in public ROW.</p>	No significant impacts; therefore, no mitigation.	LS	<p>Impact UT-1: Implementation of the proposed DTPP Plan-Wide Amendments would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.</p>	<p>Mitigation Measure UT-1a: Emergency Water Storage: All subsequent projects to pay fair-share towards the cost of emergency water storage, based each project's equivalent dwelling unit share demand for emergency water storage compared to total demand.</p> <p>Mitigation Measure UT-1b: Water System Upgrades: All subsequent projects to submit and obtain approval of engineering report demonstrating that existing water mains have sufficient pressure and flow for the project's demands Any needed capacity-enhancing improvements to be funded and/or constructed by private developers (with potential reimbursement for excess capacity).</p> <p>Mitigation Measure UT-1c: Sanitary Sewer System Upgrades: All subsequent projects to submit and obtain approval of engineering report demonstrating that existing sewer mains have sufficient capacity for the project's demands. Any needed capacity improvements per City's Engineering Standards to be funded and/or constructed by private developers (with potential reimbursement for excess capacity).</p> <p>Mitigation Measure UT-1d: Stormwater System Upgrades: All subsequent projects to submit and obtain approval of engineering report demonstrating that existing stormwater system has sufficient capacity for the project's demands. Any needed stormwater improvements to be funded and/or constructed by private developers (with potential reimbursement for excess capacity).</p>	LS	No ↑
<p>Chapter 10. Water Supply: Adequate due to fewer units than in 2005 UWMP.</p> <p>Chapter 10. Water Distribution: Adequate distribution can be provided with typical improvements in public right-of-way.</p>	No significant impacts; therefore, no mitigation.	LS	<p>Impact UT-2: With Implementation of the proposed DTPP Plan-Wide Amendments, the City would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.</p>	<p>Mitigation Measure UT-2a Recycled Water Infrastructure: Developers shall be required to install an extension of recycled water supply pipelines to each development project with sufficient recycled water capacity to provide for all of the project's recycled water demands (with potential reimbursement for excess capacity).</p>	LS	No ↑

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ⇔ - No change in severity of impact from DTPP FEIR

TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Utilities and Infrastructure (cont'd.)						
Chapter 10. Storm Drainage and Water Quality: Minimal change in runoff; construction water quality impacts avoided through Stormwater Pollution Prevention Plans; long-term water quality impacts avoided by compliance with standard conditions and regulations; no significant impact from flood risk, dam failure, or seiche/tsunami/mudflow.	No significant impacts; therefore, no mitigation.	LS	Impact UT-8: Implementation of the DTPP Plan-Wide Amendments would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; (iv) impede or redirect flood flows.	Mitigation Measure UT-8: Should realignment and alteration of Arroyo Ojo be undertaken, City would require the project applicant to develop 2 acre-feet of detention storage on the project site to reduce water levels upstream and peak flows downstream of the creek to achieve a 30-year level of service. The volume of detention reflects the volume that flow that spilled from existing on-site facilities and stored in the existing street network.	LS	Yes ↑
Noise						
Impact 11-1: Exposure to noise exceeding standards.	Mitigation 11-1: City to require noise studies for multifamily residential to achieve Noise Element guidelines (55 dBA CNEL exterior) and Title 24 standards (45 dBA CNEL interior). Now Condition of Approval 11a.	LS	Not applicable. (Effect of environment on project; not a CEQA issue)	Condition of Approval 11a: Noise Reduction Measures for Multifamily Housing: Noise studies for new multifamily residential to achieve City Noise Element guidelines (55 dBA CNEL exterior) and Title 24 standards (45 dBA CNEL interior).	LS	No ↔
No significant impacts from operational noise.	No significant impacts; therefore, no mitigation.	—	Impact NO-2: Implementation of the proposed DTPP Plan-Wide Amendments would not generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Mitigation Measure NO-2: Operational Noise Performance Standard: Applicants to select/design mechanical equipment to reduce impacts on surrounding uses by meeting the performance standards of Chapter 36.7.B of the RWC Zoning Code (55 dBA at the property lines). Acoustical study by qualified engineer to evaluate mechanical equipment noise and identify necessary reductions.	LS	Yes ↑
Impact 11-2: Groundborne vibration	Mitigation 11-2: Site-specific vibration study of buildings within 100 ft. of Caltrain/CHSR to show compliance w/FTA thresholds. Now Condition of Approval 11b.	LS	Not applicable. (Effect of environment on project; not a CEQA issue)	Condition of Approval 11b: Groundborne Vibration Measures for Habitable Buildings. The City shall require a detailed site-specific vibration study prior to development of new habitable buildings within 100 feet of the Caltrain or California High Speed Rail right-of-way to demonstrate that rail vibration either would not exceed applicable FTA thresholds or can be reduced to below applicable FTA thresholds.	LS	No ↔

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ = No change in severity of impact from DTPP FEIR

**TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR**

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Noise (cont'd.)						
Impact 11-3: Temporary construction vibration	Mitigation 11-3: Construction Vibration Reduction Restrict hours of vibration-generating activity; notify nearby occupants of pile-driving; investigate pre-drilling of pile holes; conduct pre-construction survey of nearby historic structures; monitor pile driving vibration	LS	Impact NO-3: Implementation of the DTPP Plan-Wide Amendments would not generate excessive groundborne vibration or groundborne noise levels.	Mitigation Measure NO-3: Vibration Reduction (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying edits): Restrict hours of vibration-generating activity; notify nearby occupants of pile-driving; investigate pre-drilling of pile holes; conduct pre-construction survey of nearby historic structures; monitor pile driving vibration	LS	No ↓
Impact 11-4: Temporary construction noise	Mitigation 11-4: Construction Noise Reduction Construction Plan; Construction Scheduling; Noise Reduction for Equipment; Equipment Location; Construction Traffic Routing; Quiet Equipment Selection; Temporary Barriers/Noise Blankets; Noise Disturbance Coordinator	LS	Impact NO-1: Implementation of the proposed DTPP Plan-Wide Amendments would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Mitigation Measure NO-1: Construction Noise Reduction (formerly Mitigation Measure 11-4 from the DTPP Final EIR with clarifying amendments): Construction Plan; Construction Scheduling; Noise Reduction for Equipment; Equipment Location; Construction Traffic Routing; Quiet Equipment Selection; Temporary Barriers/Noise Blankets; Noise Disturbance Coordinator	LS	No ↔
Air Quality						
Criteria Air Pollutant and Ozone Precursor Impacts	No mitigation required due to Plan consistency and no increase in VMT > Population	LS	Impact AQ-2: Adoption of the proposed DTPP Plan-Wide Amendments would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Significance conclusion attributable to only the largest projects.	Mitigation Measure AQ-2a: Best Management Practices for Construction Dust Suppression. Mitigation Measure AQ-2b: Emission Reduction Measures for Projects Exceeding the Significance Thresholds for Criteria Pollutants. Projects that exceed BAAQMD screening levels to undertake project-specific emissions inventory. If construction threshold(s) exceeded, employ Tier 4 Final construction equipment, electric equipment, etc., and limit idling. If operational threshold(s) exceeded, projects shall be "all electric" (no natural gas [MM CC-1]); provide EV charging infrastructure (MM CC-1); demonstrate compliance with the City's TDM Ord.; and provide electrified loading docks. If threshold(s) still exceeded, applicant shall pay offset fees to fund emissions reduction = exceedance.	SU	Yes ↑

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ - No change in severity of impact from DTPP FEIR

TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Air Quality (cont'd.)						
Impact 12-1: Toxic air contaminants on new receptors (now considered an effect of the environment on the project; not a CEQA concern)	Mitigation 12-1: New receptors to install filtration <i>[now required by CA Energy Code]</i> ; site new receptors appropriately <i>[not a CEQA impact, per CBIA v. BAAQMD]</i> .	LS	Impact AQ-3: Adoption of the proposed DTPP Plan-Wide Amendments would not expose sensitive receptors to substantial pollutant concentrations.	Mitigation Measure AQ-3: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Health Risks from Construction. Projects w/in 1,000 ft. of existing/approved sensitive receptors to prepare project construction HRA; if risk is found significant, use Tier 4 Final construction equipment and use electric tower cranes and man-/material- lifts and electric or LNG forklifts.	LS	No ↑
Impact 12-2: Generation of objectionable odors	Mitigation 12-2: Filtration or other odor reduction on food uses	LS	Impact AQ-4: Generation of objectionable odors (less-than-significant impact)	No mitigation required due to BAAQMD regulations, which render Mitigation 12-2 unnecessary.	LS	NO ↓
Cumulative Criteria Air Pollutants	No mitigation required due to Plan consistency and no increase in VMT > Population	LS	Impact C-AQ-1: Adoption of the DTPP Plan-Wide would result in a cumulatively considerable contribution to the regional cumulative air quality impacts.	Implement Mitigation Measure AQ-2b.	SU	Yes ↑
Cumulative Health Risk	No significant impacts; therefore, no mitigation.	LS	Impact C-AQ-2: Adoption of the DTPP Plan-Wide, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to local health risk impacts.	Implement Mitigation Measure AQ-3.	LS	No ↑
Climate Change						
Impact 13-1: Flooding due to Sea Level Rise (now considered an effect of the environment on the project; not a CEQA concern)	Mitigation 13-1: City to prepare response strategies that address sea level rise and increased flooding, and other climate change induced events such as flooding, landslides, and soil erosion.	SU	Impact CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (Approach to analysis is different than in DTPP due to subsequent changes in regulations and recent adoption of updated BAAQMD Guidelines)	Mitigation Measure CC-1: Enforce No Natural Gas Requirement and Require Compliance with EV Requirements in CALGreen Tier 2: Subsequent development projects proposed as part of the DTPP Plan-Wide Amendments shall not be eligible for exceptions from the "all electric" requirement in the City's Reach Codes, and shall comply with EV requirements in the City's Reach Codes or the most recently adopted version of CALGreen Tier 2 at the time that a building permit application is filed, whichever is more restrictive.	SU (Due to Reach Code exceptions)	Yes ↑

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ⇔ - No change in severity of impact from DTPP FEIR

**TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR**

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Climate Change (cont.)						
Plan consistency not analyzed.	No mitigation identified.		Impact CC-2: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Implement Mitigation Measure CC-1.	SU	Yes ↑
Cumulative Climate Change: Cumulative flooding due to Sea Level Rise (now considered an effect of the environment on the project; not a CEQA concern)	Mitigation 13-1: City to prepare response strategies that address sea level rise and increased flooding, and other climate change induced events such as flooding, landslides, and soil erosion.		Impact C-CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would not result in a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of greenhouse gases.	Implement Mitigation Measure CC-1.	SU	Yes ↑
Biological Resources						
Impact 15-1: Impacts on Special-Status Species and Sensitive Natural Communities Impact 15-3: Impacts on wildlife movement and migratory wildlife	Mitigation 15-1: Consult resources agencies re: take; comply w/RWC Stormwater Management & Discharge Control Program Mitigation 15-3: Avoid tree removal & trimming during breeding season, if feasible; if not feasible, conduct pre-constr. bird surveys & protect nesting birds	LS	Impact BIO-1: Implementation of the proposed DTPP Plan-Wide Amendments would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. Impact BIO-4: Implementation of the proposed DTPP Plan-Wide Amendments would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Mitigation Measure BIO-1 (formerly Mitigation Measure 15-3 from the DTPP Final EIR): Project applicant to ensure that all tree removal and trimming and ground disturbing activities take place outside breeding season (February 15 to August 31); if unavoidable during this time, qualified biologist to conduct nesting bird survey and, if active nests of protected species detected, suitable buffer to be established around the nest.	LS	No ↔
Impact 15-3: Impacts on wildlife movement and migratory wildlife			Impact BIO-2: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Mitigation Measure BIO-2a (formerly Mitigation Measure 15-1(b) from the DTPP Final EIR with clarifying amendments): Project applicant/City to comply with the Redwood City Stormwater Pollution Prevention Program. Mitigation Measure BIO-2b (formerly Mitigation Measure 15-2 from the DTPP Final EIR with clarifying amendments): For projects that modify potential wetlands, riparian zones, or regulated waters, project applicant to obtain permits and approvals from applicable resource agencies and comply with required mitigation.		

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ = No change in severity of impact from DTPP FEIR

TABLE 2-2 (CONTINUED)
SUMMARY COMPARISON OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES: DTPP PLAN-WIDE AMENDMENTS AND DTPP FEIR

DTPP Impacts	Mitigation Measure(s)	SAM	DTPP Plan-Wide Impacts	Mitigation Measure(s)	SAM	Worse?
Biological Resources (cont.)						
Impact 15-2: Wetlands	Mitigation 15-2: Obtain required permits from resource agencies for wetlands modifications	LS	Impact BIO-3: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Implement Mitigation Measure BIO-2b.	NI	No ↔
Impact 15-4: Loss of heritage trees	Mitigation 15-4: Comply w/RWC Tree Preservation Ordinance.	LS	Impact BIO-5: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Mitigation Measure BIO-5 (formerly Mitigation Measure 15-4 from the DTPP Final EIR): The Project applicant shall ensure that any project in the amended DTPP area that would involve the removal of any tree shall complete the application and review process specified in the City's Tree Preservation Ordinance (Municipal Code chapter 35) prior to project approval.	LS	No ↔
Geology and Soils						
Impact 16-3: Erosion and sedimentation	Mitigation 16-3: Project-specific erosion control plans, Stormwater Pollution Prevention Plans, Best Management Practices.	LS	Impact GEO-2: Implementation of the proposed DTPP Plan-Wide Amendments would not result in substantial soil erosion or the loss of topsoil.	Mitigation Measure GEO-2 (formerly Mitigation Measure 16-3 from the DTPP Final EIR with clarifying amendments): Project Applicants for grading 10,000 or more square feet to prepare and implement erosion control plans and required project Stormwater Pollution Prevention Plans (SWPPPs) as well as City Code-specified Best Management Practices (BMPs).	LS	No ↔
Impact 16-1: Expansive soils Impact 16-2: Corrosive soils	Mitigation 16-1: Geotechnical investigations for specific projects. Mitigation 16-2: Projects to ensure that water systems and other buried metal infrastructure have cathodic protection; concrete mix designs shall conform to Caltrans Memo to Designers 10-5.	LS	Impact GEO-4: Implementation of the proposed DTPP Plan-Wide Amendments would not be located on expansive or corrosive soil creating substantial direct or indirect risks to life or property.	Mitigation Measure GEO-4a (formerly Mitigation Measure 16-1 from the DTPP Final EIR with clarifying amendments): Applicants to prepare detailed, design-level geotechnical investigations including analysis of expansive soil hazards and recommend stabilization measures. Mitigation Measure GEO-4b (formerly Mitigation Measure 16-2 from the DTPP Final EIR with clarifying amendments): Projects to ensure that water systems and other buried metal infrastructure have cathodic protection; concrete mix designs shall conform to Caltrans Memo to Designers 10-5.	LS	No ↔

NOTES: SAM = Significance after Mitigation; S=Significant; LS = Less than Significant; SU = Significant Unavoidable; ↓ / ↑ = Less severe / More severe impact than DTPP FEIR; ↔ = No change in severity of impact from DTPP FEIR

2.5 Summary of Alternatives

The potential environmental consequences of the DTPP were analyzed in detail in the DTPP Final EIR. After considering a reasonable range of potentially feasible alternatives, the City in 2011 chose to adopt a combination of two alternatives instead of the proposed project: (1) revised maximum allowable density (MAD) caps providing for an increase in office/commercial and a decrease in retail; and (2) revised historic resource preservation regulations.

As discussed in the various SEIR chapters analyzing environmental topics (e.g., Cultural and Historic Resources, Utilities and Infrastructure, Noise, Air Quality, Climate Change, Biological Resources, Geology and Soils), the proposed DTPP Plan-Wide Amendments would result in seven significant impacts that would not be mitigated to a less-than-significant level. These impacts include: substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; cumulative impacts related to historical resources; cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard; cumulatively considerable contribution to the regional cumulative air quality impacts; generation of greenhouse gas emissions that may have a significant impact on the environment; conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases; and a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Chapter 19 of this SEIR includes an analysis of the No Project Alternative, which is a CEQA requirement, a Reduced Development Alternative, and an Altered Land Use Mix Alternative. The No Project Alternative would not implement the proposed DTPP Plan-Wide Amendments, and future development in the area would be subject to the current DTPP, General Plan, and development caps for office and residential uses in the DTPP area. The Reduced Development Alternative and the Altered Land Use Mix Alternative would each have somewhat lesser effects than would the proposed DTPP Plan-Wide Amendments with respect to most impacts related to the intensity of development—criteria air pollutant, toxic air contaminant, and greenhouse gas emissions (climate change); noise and vibration; population and employment; and demand for public services and utilities. Concerning transportation, these two alternatives would each have somewhat worse impacts with respect to vehicle miles traveled than would the proposed project, because they would result in relatively less office development near transit; in each case, the impact would be significant, unlike the proposed DTPP Plan-Wide Amendments, which would have a less-than-significant VMT impact.

Effects related to site-specific conditions—those related to aesthetics and shadows, cultural resources and tribal cultural resources, hazard and hazardous materials, biological resources, hydrology, and geological and paleontological resources—would generally be the same as or similar to those of the proposed DTPP Plan-Wide Amendments.

With the exception of potential impacts of subsequent individual development project(s) with respect to cultural, historic, and tribal cultural resources, criteria air pollutants, and climate

change, which could be significant and unavoidable for each alternative, as they could for the proposed DTPP Plan-Wide Amendments, and with the further exception of VMT impacts, noted above, all impacts would be less than significant for each alternative, in some cases with mitigation.

The Reduced Development Alternative would be considered the Environmentally Superior Alternative.

2.6 Mitigation Implementation

For those mitigation measures identified in this SEIR that are adopted by the City, a mitigation monitoring and reporting program will be undertaken by City staff to ensure and verify mitigation implementation. Implementation of most of the mitigation measures recommended in this SEIR could be effectively implemented through incorporation into the final version of one or more of the various project components (e.g., the project itself, and/or related DTPP and General Plan amendments) and/or can be implemented (monitored and verified) through the City's normal development review procedures following adoption of these components. Pursuant to CEQA Guidelines Section 15097, adoption of a mitigation monitoring and reporting program will be necessary before the project can be adopted by the City Council of Redwood City.

This page intentionally left blank

CHAPTER 3

Project Description

3.1 Introduction

The City is considering DTPP amendments to revise certain development standards, guidelines and policies, and to provide for internal consistency including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation; building placement; minimum building height and massing; parking; historical resources; and open space. These amendments are collectively referred to as the “DTPP Plan-Wide Amendments.” The proposed DTPP Plan-Wide Amendments are program-level changes to land use policies in the Downtown area. The proposed amendments are informed by the Gatekeeper Projects (described below) and are intended to make policy changes in advance of these Gatekeeper Projects being processed to ensure they conform to the City’s vision for the development of the Downtown. To help ensure this conformance, the proposed DTPP Plan-Wide Amendments would require City Council approval of any Large Project requesting a General Plan Amendment and that the applicant for any such project negotiate a Development Agreement with the City.

This SEIR also evaluates a potential future extension of the northern DTPP area boundary between El Camino Real and the Caltrain tracks to accommodate one of the six so-called “Gatekeeper Projects” for which the City Council has authorized consideration of General Plan amendments (see additional discussion below). In addition, this SEIR programmatically evaluates amendment of the maximum allowable development cap for office development to add 80,000 square feet specifically reserved for small offices. It also evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP.

Since the adoption of the City’s General Plan in 2010, the City has experienced substantial growth and development due to a variety of factors. A strong economy and the adoption of the DTPP in 2011 streamlined project analysis and public review by setting overall development caps (Maximum Allowable Development) for office, residential, retail, and hotel development. The caps for office space and residential uses specified in both the DTPP and the General Plan are almost met, so any project proposing to exceed these caps has had to request both a General Plan amendment and a DTPP amendment to increase the cap(s).¹

¹ The DTPP and General Plan development cap for office space was previously amended in 2018 to add 74,667 square feet, allocated to the 851 Main Street project, bringing the office cap to 574,667 square feet. The residential cap remains at 2,500 units, but is proposed to be eliminated, consistent with state law.

Given the recent large number of projects requesting such amendments, the City Council used a “Gatekeeper” process to evaluate pending amendment requests. Pursuant to the Redwood City Municipal Code Chapter 18, Article XI (Adoption and Amendment of General Plan), the City Council analyzed a variety of conceptual projects against its Strategic Plan and Priorities² and authorized six projects (five of which are within the existing DTPP boundary and one of which, 651 El Camino Real, is located just outside the current boundary, as described below) to formally submit applications to initiate the General Plan and DTPP amendment process and obtain any necessary discretionary approvals. Those individual DTPP “Gatekeeper Projects” are located at: 1) 651 El Camino Real, 2) 901–999 El Camino Real/Caltrain Property, 3) 2300 Broadway, 4) 603 Jefferson/750 Bradford, 5) 1900 Broadway, and 6) 601 Allerton Street.

Applications for the individual Gatekeeper Projects are in various stages of planning, revision, and submission and none have been deemed complete. The City Council’s conceptual review of the Gatekeeper Projects did not constitute the Council’s approval, nor has the City made any commitment to approve any or all of these projects. However, as a result of that process, City staff was directed by the City Council to review and recommend appropriate maximum square footage and number of units for office and residential development, respectively, that would be permitted under the General Plan and DTPP. In the case of office development, this maximum would constitute a cap on the amount of office square footage that could be permitted without further General Plan and DTPP Plan-Wide Amendments, consistent with the existing controls in both plans. The DTPP Plan-Wide Amendments would include an increase of 80,000 square feet in the office development cap, to be reserved specifically for small office projects (those of 20,000 net new square feet or less). However, added development capacity beyond this small-office allocation would not be part of the DTPP Plan-Wide Amendments; instead, for Gatekeeper office projects and other proposed office development larger than 20,000 net new square feet, the office development cap would be adjusted in the future through project-specific amendment of the DTPP and General Plan as each subsequent development project is brought forward for consideration. The additional DTPP office development assumed in this SEIR is discussed below in Section 3.5, *Project Components*.

With respect to residential development, staff is proposing a different approach, consistent with the state’s Housing Accountability Act (HAA; Government Code Sec. 65589.5) and Housing Crisis Act of 2019 (HCA; Senate Bill 330). Therefore, the existing cap on residential development in the DTPP area is proposed to be eliminated. Accordingly, in the case of residential development, the staff recommendation takes the form of a projected maximum

² The City Council sets the City’s Vision and Mission and adopts a multi-year Strategic Plan to guide policy-making and service delivery. In 2020, the City Council adopted a Strategic Plan that established new vision and mission statements and nine Guiding Principles. To address the most pressing community and regional challenges, the Council selected three Strategic Priorities: housing, transportation, and children and youth (in priority order). The Council’s Guiding Principles are Aesthetics, Communication and Community Building, Economic Vitality, Excellence in Government Operations, Healthy Community for All Ages, Housing, Public Safety, Sustainability and Transportation. In August 2020, the Council reaffirmed these Strategic Priorities and emphasized the importance of social equity and integrating diversity, equity and inclusion in the provision of all City services. In October 2020, the Council amended the Strategic Plan to include a Foundational Guiding Principle: Redwood City will put equity first, urging a collective restart so that policies serve the entire community (Redwood City’s Vision, Mission, and Strategic Plan website, <https://www.redwoodcity.org/city-hall/city-council/redwood-city-strategic-plan>; reviewed April 6, 2022).

number of residential units to be analyzed in this SEIR. The additional DTPP residential development assumed in this SEIR is discussed below in Section 3.5, *Project Components*.

The DTPP Plan-Wide Amendments include changes to certain development standards, guidelines and policies, including but not necessarily limited to those with respect to permitted or conditionally permitted land uses (including allowing Research and Development [R&D] Laboratory space as a conditional use); streets and circulation (including pedestrian, bicycle, and vehicular circulation); building placement; minimum building height and massing (including allowing the development of rooftop structures that would support a rooftop recreation use within existing height limitations); parking; historical resources; and open space. The proposed amendments would also allow for exceptions, at certain sites, to requirements concerning building placement, minimum heights, and stepdown zones. As stated above, this SEIR also analyzes a potential future expansion of the boundary of the DTPP area approximately 0.1 miles northward between El Camino Real and the Caltrain tracks, as well as the potential for additional office and residential development.

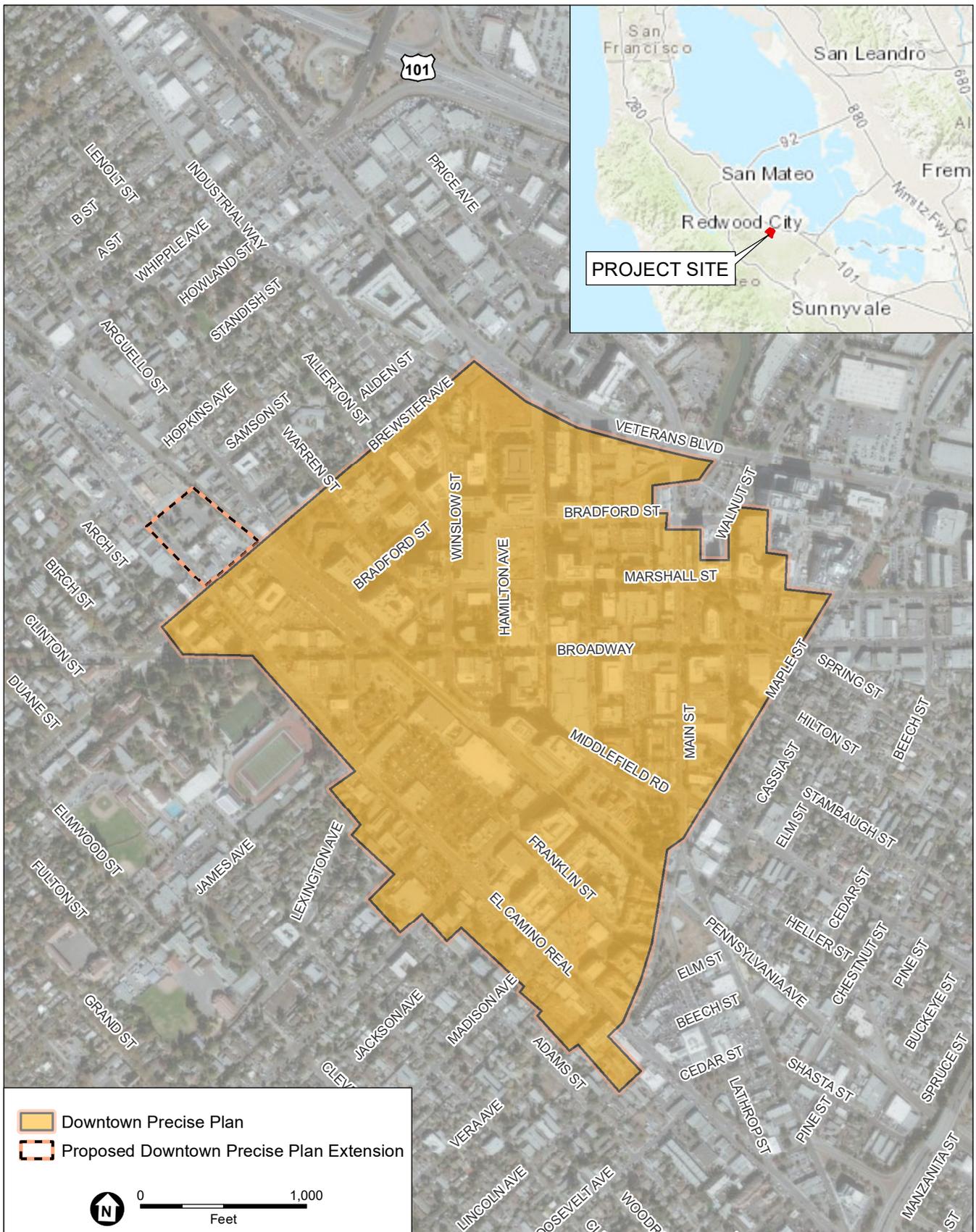
3.2 Project Location

The project site is located within Downtown Redwood City in the DTPP area, generally bounded by Veterans Boulevard, Maple Street, El Camino Real, and Brewster Avenue in Redwood City, San Mateo County, California (see **Figure 3-1**). The analyses in this SEIR also include a potential future extension of the northern DTPP area boundary to include the following five parcels not currently within the DTPP area: APNs 052-271-030 (one of the Gatekeeper Projects), -040, -050, -080, and -090.

3.3 Project Objectives

The proposed DTPP Plan-Wide Amendments would consist of amendments to the Redwood City General Plan and DTPP to achieve the following City objectives:

- To continue to allow for sustainable, transit-oriented development that is responsive to market demands and can be constructed. This additional development would be advanced through subsequent project-specific DTPP and General Plan amendments to increase the DTPP's maximum allowable development cap for office use, and through subsequent project-specific approval(s) of increases in the number of residential units. This development would occur in an urban setting near employment, goods and services, and multimodal transportation facilities, thereby reducing vehicle miles traveled, greenhouse gas emissions, and air quality impacts, consistent with the City's Housing, Transportation (Transit-Oriented Development), and Climate Goals;
- To meet the City's housing needs for people at all income levels, incentivizing and encouraging the production of housing to meet Regional Housing Needs Assessment (RHNA) requirements and the City's aspirational goal of planning for 150 percent of the RHNA allocation;
- To increase the supply of affordable housing units in the City, with an emphasis on encouraging production of on-site and off-site affordable housing, providing additional opportunities for affordable housing for residents to live in or close to Downtown where there is better access to employment, goods and services, and multimodal transportation facilities;



SOURCE: ESRI Imagery; City of Redwood City, 2021

DTPP Plan-Wide Amendments SEIR

Figure 3-1
Project Site Location



- Increase the office development cap modestly (by 80,000 square feet) specifically reserved for small office projects, defined as 20,000 net new square feet or less of office space.
- To create and maintain a multimodal, safe, and accessible transportation network and to encourage development within close proximity to transportation networks;
- To create opportunities for children and youth to grow, learn, and play in safe and healthy environments, including increasing opportunities for youth activities;
- To encourage economic growth in the community through the creation of construction jobs and full-time, on-site jobs;
- To make circulation improvements to promote quality vehicular, bicycle and pedestrian connections;
- To lower the parking requirement for motor vehicles to reflect actual demand, current best practices and future plans for Caltrain track expansion that will encourage non-driving modes of transportation while continuing to incentivize shared parking and the ability for project applicants to pay a fee to the City in lieu of providing new parking spaces, and to increase required bicycle parking;
- To require frontage improvements to support active transportation consistent with RWCmoves (Redwood City’s Citywide Transportation Plan); with the City’s El Camino Real Corridor Plan; and with the RWC Walk Bike Thrive initiative approved by the City Council in June 2022;
- To accommodate certain rooftop active, recreational uses providing project amenities or benefits (e.g., rooftop bars/restaurants, open spaces, gardens, sports courts, swimming pools, landscaping, and publicly accessible amenities) by allowing rooftop structures that support rooftop uses;
- To accommodate the potential for Research and Development (R&D) laboratories in the DTPP area, as a conditionally permitted use. While R&D, Office Type, is currently a permitted use, the DTPP Plan-Wide Amendments contemplate the addition, as a conditionally permitted use, of R&D, Laboratory Type, as defined in the Zoning Ordinance. Potential performance standards may be considered to address use, manufacturing and storage of hazardous materials, deliveries associated with R&D Laboratory uses, and the impacts of these uses near sensitive receptors (including schools, community centers, residential uses, etc.); and
- To allow some development flexibility by permitting limited exceptions, for sites that are constrained by either the anticipated Caltrain track improvements and realignment or by creek or stormwater features, or that provide publicly accessible open space as identified by the City, to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner setbacks, other setbacks from the street, and lesser lot coverage than is currently required; permitting limited exceptions to the stepdown requirements; and lowering the required minimum heights from 35 feet to two stories, with a range of 25 to 35 feet, or less with a potential exception.

3.4 Existing Land Uses and Development Controls

Land uses in the DTPP area generally include a mix of commercial/retail, office, industrial, residential, and institutional uses, as well as surface and structured parking, that is similar in types

of uses to, albeit at greater intensity than, what was described in the 2010 Final SEIR as the then-existing conditions, prior to adoption and implementation of the DTPP. In particular, the area proximate to the Redwood City Caltrain Station and Transit Center has seen substantial growth, with mid-rise (up to 8 stories) office and residential buildings having been newly constructed since DTPP adoption on both sides of the Caltrain tracks. Further north, in the vicinity of the San Mateo County offices, there are new residential buildings as tall as 10 stories. Most of these newer structures have ground-floor retail space. The entire DTPP area has a General Plan designation of Mixed-Use Downtown and a zoning designation of Planned Community District (P District).^{3,4} Additional detail on existing land uses is provided in Chapter 4, Land Use and Planning.

The remainder of this section describes the existing land uses and development controls on the six Gatekeeper Project sites (one of which is proposed to be added to the DTPP area) and on the five additional parcels that would be within the DTPP area if the potential future DTPP boundary extension is subsequently approved. These two areas of anticipated changes are depicted on **Figure 3-2**.

3.4.1 Gatekeeper Project Sites

A summary of the six Gatekeeper Project sites is provided below as these sites are currently the subject of applications for redevelopment. These sites are representative of the redevelopment potential of certain locations within the amended DTPP area (including a potential future northward expansion to accommodate one Gatekeeper Project) where existing land uses may not be maximizing the development potential.⁵ Each of these sites is currently occupied predominately by one- and two-story commercial buildings, where the height limit is generally five to eight stories or more, or by surface parking, roadways, pocket parks, and storm water infrastructure. While subject to change, additional detail regarding the applicant Gatekeeper Project proposals for specific project elements (e.g., size and type of land use, open space, parking, etc.) is provided in **Appendix B**.

651 El Camino Real (APN 052-271-030)

This parcel is approximately 73,245 square feet (1.65 acres) and has a General Plan designation of Mixed Use – Corridor and is currently located within the Mixed Use Corridor – El Camino Real (MUC-ECR) zoning designation. The site is bordered to the north and south by adjacent developed parcels, to the east by the Caltrain tracks, and to the west by El Camino Real. It is currently occupied by a one-story American Legion meeting hall, a two-story single-family home

³ Development standards for Mixed-Use Downtown are defined in the Redwood City General Plan (Urban Form and Land Use page BE-47).

⁴ Purpose and requirements for P District zoning is provided in the Redwood Zoning Code, Article 52 – Planned Community District.

⁵ The analyses in the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.



SOURCE: ESRI Imagery; City of Redwood City, 2022

DTPP Plan-Wide Amendments SEIR

Figure 3-2
Gatekeeper Project Locations and
Potential Future DTPP Boundary Expansion

(currently unoccupied), and surface parking. This site is not currently within the DTPP area and is proposed to be added to the DTPP area as part of a subsequent project-specific approval, following adoption of the DTPP Plan-Wide Amendments. If approved, this expansion of the DTPP area would change the General Plan land-use designation to Mixed Use – Downtown and the zoning to P District.⁶

901-999 El Camino Real/Caltrain Property (APNs 052-351-010, -020, -030, 052-352-010 [portion])

The first three parcels listed front El Camino Real. They, along with part of a fourth parcel (APN 052-352-010) that is owned by the Peninsula Corridor Joint Powers Authority, operator of Caltrain (hereinafter, “Caltrain”) and the segment of California Street between Winklebleck Street and James Avenue, comprise approximately 71,600 square feet and together comprise this Gatekeeper Project site.⁷ These parcels have a General Plan designation of Mixed-Use Downtown and are located within the P District zone. This site is bordered to the north by Winklebleck Street, to the south by James Avenue, and to the west by El Camino Real; the eastern boundary would extend through APN 052-352-010, parallel to El Camino Real. There is a total of three one-story retail/restaurant buildings on the site, two of which are currently occupied and one of which is vacant. The remainder of the site is occupied by surface parking, roadways, Little River Park (including Arroyo Ojo, a small creek that is otherwise completely culverted within downtown Redwood City), and a portion of the Redwood City Transit Center.

2300 Broadway (APN 052-364-130)

This parcel is approximately 39,509 square feet and has a General Plan designation of Mixed-Use Downtown and is located within the P District zone. The site is bordered to the north by an adjacent developed parcel, to the south by Broadway, to the east by Hamilton Street, and to the west by Winslow Street. It is currently occupied by a two-story retail (bank) building, existing Redwood trees, and surface parking.

603 Jefferson Avenue/750 Bradford Street (APNs 052-373-040 and -120)

These two parcels comprise approximately 54,324 square feet and have a General Plan designation of Mixed-Use Downtown and are located within the P District zone. The site is bordered to the east and south by adjacent developed parcels, to the north by Bradford Street, and to the west by Jefferson Avenue. There are two buildings on the site: a two-story office building (school administration) and a vacant one-story building, most recently used as office space. The remainder of the site is occupied by surface parking and an existing stormwater culvert.

⁶ The other five Gatekeeper Project sites are within the existing DTPP area.

⁷ As described in Appendix A, this site would involve a land exchange between the Joint Powers Authority and a private entity. The description of this project site assumes that this land exchange is completed. Consistent with CEQA’s informational purpose, to the extent details are available, this SEIR includes information based on this land exchange as part of its impact analysis.

1900 Broadway (APNs 053-231-200 and -210)

These two parcels comprise approximately 69,875 square feet and have a General Plan designation of Mixed-Use Downtown and are located within the P District zone. APN 053-231-210 (approximately 48,774 square feet) is currently occupied by a 25,000 square-foot two-story office and retail (bank) building and associated surface parking (approximately 62 stalls). APN 053-231-200 (approximately 21,101 square feet) comprises the Spring/Marshall Parklet and the segment of Spring Street that runs diagonally between Main and Walnut Streets. The site is bordered to the north by Marshall Street, to the south by Broadway, to the east by Walnut Street, and to the west by Main Street.

601 Allerton Street (APN 052-331-120)

This parcel is approximately 20,527 square feet and has a General Plan designation of Mixed-Use Downtown and is located within the P District zone. The site is bordered to the north and west by adjacent developed parcels, to the east by Allerton Street, and to the south by Fuller Street. It is currently occupied by an approximately 20,000 two-story office building and surface and covered parking (totaling approximately 32 spaces).

3.4.2 DTPP Boundary Extension

As shown above in Figure 3-2, this SEIR analyzes the potential future extension of the existing DTPP area boundary approximately 0.1 miles northward between El Camino Real and the Caltrain tracks to include five additional parcels on approximately 3.5 acres. If subsequently approved as is assumed herein, this expansion would result in a DTPP boundary that responds to the development potential of parcels located close to the planned relocation and expansion of the Redwood City Caltrain Station (see Section 3.6, Adjacent Transit Improvements, below). This potential future boundary adjustment, to accommodate the proposed project at 651 El Camino Real, would require both DTPP and General Plan amendments and thus would necessitate City Council approval.

APN 052-271-030 (651 El Camino Real)

This parcel is one of the Gatekeeper Project sites and is discussed above.

APN 052-271-040

This parcel is located at 665 El Camino Real and is approximately 6,759 square feet. The site is bordered to the north, east, and south by adjacent developed parcels, and to the west by El Camino Real. It has a General Plan designation of Mixed Use – Corridor and is zoned MUC-ECR. The site is currently occupied by a one-story building with one retail store.

APN 052-271-050

This parcel is located at 667-673 El Camino Real and is approximately 6,698 square feet. The site is bordered to the north, east, and south by adjacent developed parcels, and to the west by

El Camino Real. It has a General Plan designation of Mixed Use – Corridor and is zoned MUC-ECR and is currently occupied by a one-story building with two retail stores.

APN 052-271-080

This parcel is located at 934 Brewster Avenue and is approximately 44,029 square feet. The site is bordered to the north and west by adjacent developed parcels, to the east by the Caltrain tracks, and to the south by Brewster Avenue. It has a General Plan designation of Mixed Use – Corridor and is zoned MUC-ECR and is currently occupied by a San Mateo County Transit District (SamTrans) facility.

APN 052-271-090

This parcel is located at 699 El Camino Real and is approximately 19,720 square feet. The site is bordered to the north and east by adjacent developed parcels, to the west by El Camino Real, and to the south by Brewster Avenue. It has a General Plan designation of Mixed Use – Corridor and is zoned MUC-ECR and is currently occupied by a gas/service station.

3.5 Project Components

The proposed DTPP Plan-Wide Amendments would revise certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation; building placement; minimum building height and massing; parking; historical resources; and open space. The amendments would also require that any Large Project that requires a project-specific General Plan Amendment be approved by the City Council (with recommendation by the Planning Commission).^{8,9} Additionally, the amendments would require the applicant for any subsequent Large Project in the DTPP area requesting a General Plan amendment to negotiate a Development Agreement with the City to address community benefits offered by the project.

Existing height limits in the DTPP area range from 3 stories (35 feet)—generally applicable only to the first 20 to 60 feet extending back from certain amended DTPP area streets, including Broadway, Main Street, Brewster Avenue, Maple Street, segments of Middlefield Road and Hamilton Street, and short segments of certain streets along the amended DTPP area’s western boundary—to 10 stories (114 feet) and 12 stories (136 feet) in the area generally bounded by Veterans Boulevard, Jefferson Avenue, El Camino Real, and James Avenue/Winslow Street. Much of the remaining

⁸ The DTPP defines Large Projects as those with no on-site historical resources (such sites are treated separately) and that meet one of the following: 1) addition to an existing building, on a site larger than 30,000 square feet, of more than 10 percent new floor area; 2) New construction, on a site larger than 30,000 square feet in size; development of a parking structure that is fully or partially exposed to the street on all levels (i.e., not wrapped within the interior of a larger structure); or 4) New construction or building addition exceeding 35 feet or three stories in height, unless the addition is determined to be minor by the Community Development Director or Designee.

⁹ Under the existing DTPP, Large Projects may be approved by the Planning Commission.

DTPP area has a height limit of 8 stories (92 feet).¹⁰ Most of the northwestern and southeastern edges of the amended DTPP area have a height limit of 5 stories (59 feet), while the southwestern edge has a height limit of 4 stories (48 feet). No changes are proposed at this time to maximum allowable building heights within the DTPP area, although as described below, allowable massing and rooftop structures controls would be altered, but still subject to existing height limitations.¹¹

No change is proposed to retail or lodging development potential, as both uses have unused development capacity in the DTPP.¹² Replacement of existing retail space with new retail uses within the amended DTPP area, along with any potential net increase in retail space within the amended DTPP area, would not necessitate an increase in the retail development cap, and thus no change in the retail cap is proposed. Accordingly, retail is discussed in herein for informational purposes only. Any office or residential development exceeding the amount studied in this SEIR would potentially be subject to additional environmental review.

Each of the above components is described in greater detail below.

3.5.1 Land Use Controls and Development Assumptions

Land Use Controls

The proposed DTPP Plan-Wide Amendments include adjustments to parking ratios, circulation, and other DTPP Development standards, guidelines and policies. One or more changes are proposed to the DTPP with respect to permitted or conditionally permitted land uses, including allowing Research and Development Laboratory space as a conditional use.

The DTPP Plan-Wide Amendments would not generally make any changes in allowable maximum building heights or permitted massing, with certain exceptions: building placement, required minimum height, and height stepdown zone requirements would be modified to allow the City to grant exceptions in exchange for provision of community benefits (see third and fourth bullets below). Additionally, accessory rooftop structures, now prohibited, would be permissible

¹⁰ It can be anticipated that certain subsequent development pursuant to the proposed DTPP Plan-Wide Amendments could require the provision of standby and emergency power—required for buildings with an occupiable floor level more than 75 feet above grade pursuant to the California Building Code (Sections 403.4.8, 2702, and 3003). (Effectively, this requirement applies to buildings with a roof height of about 85 feet or more, which is to say, in general, commercial structures of 8 or more stories and residential structures of 9 stories or more.) These backup power systems, which allow for emergency operation of building components such as elevators, fire detection systems, emergency lighting, and fire pumps, among other things, would likely be provided through the installation of backup generators, which are most commonly diesel-fueled. In general, such diesel backup generators are operated only for emergency use and occasional testing; the latter is commonly limited to 50 hours per year. Backup generators require a permit from the Bay Area Air Quality Management District.

¹¹ If the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

¹² Retail uses are principally or conditionally permitted in the DTPP. Lodging uses are principally permitted throughout the DTPP, although limited to upper floors in some parts of Downtown.

to support a rooftop recreational use. However, there would be no changes to the existing height limits (i.e., the maximum building height would not change).¹³

Potential changes to DTPP land use controls would include, but not necessarily be limited to, the following:

- A requirement for City Council approval of any Large Project requesting a General Plan Amendment and that the applicant for any such project negotiate a Development Agreement with the City (DTPP Section 2.0);
- The potential addition, as a conditionally permitted use, of Research and Development (R&D) Laboratory Type, within the Downtown General district (DTPP Section 2.2). (R&D Office Type, with minimal R&D Laboratory space, is currently a permitted use.) Potential performance standards may be considered to address use, manufacturing and storage of hazardous materials, deliveries associated with R&D Laboratory uses, and the impacts of these uses near sensitive receptors (including schools, community centers, residential uses, etc.). If R&D Laboratory space were to be conditionally permitted, it is anticipated that certain standard conditions would be drafted and imposed on such projects. These conditions could include, but not necessarily be limited to, requirements that all operations be located inside a building and not produce noise, vibration, odor, glare, or dust impacts on the surroundings; and truck loading and unloading must occur off street and be limited to the early morning and late evening hours. Moreover, consistent with federal, state, and local law, as applicable, all R&D Laboratory operations would be required comply with applicable health and safety codes.
- Revisions to the DTPP New Streets (Circulation) Regulations and associated revisions to DTPP maps (DTPP Section 2.3) to reflect realignment, relocation, closure, and/or vacation of certain street segments, as well as to update the typology of some streets, and provide zoning for those street segments to be vacated, where applicable;
- Allowance for exceptions to mandatory standards in the DTPP Development Regulations (DTPP Sections 2.5 and 2.7) for sites identified as potentially providing privately owned publicly accessible open space that is identified on the Potential Public Open Space Map in DTPP Section 3.2.1. This would entail permitting limited exceptions to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner setbacks, other setbacks from the street, and lesser lot coverage than is currently required. The exceptions would allow for reduced massing and shadows, an enhanced pedestrian experience, and provide support for ground floor retail. Exceptions would also be available for these sites from required minimum height and stepdown zone requirements;
- Allowance for the same exceptions as noted in the previous bullet to mandatory standards in the DTPP Development Regulations (DTPP Sections 2.5 and 2.7) for sites that are constrained by potential anticipated Caltrain track improvements and realignment, as identified on the Potential Transit Projects Map (DTPP Section 3.2.3), or physically constrained by creek or stormwater features as identified on the Potential Public Open Space

¹³ As stated above, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

Map (Section 3.2.1). Exceptions would also be available for these sites from required minimum height and stepdown zones;¹⁴

- Revisions to the DTPP parking ratios (DTPP Section 2.6) to lower the vehicle parking requirement and increase the bicycle parking requirement to reflect anticipated reduced future parking demand, ensure consistency with AB 2097, current best practices, and future plans for Caltrain track expansion that will encourage non-driving modes of transportation while continuing to incentivize shared parking and the ability to pay in-lieu fees, and to increase required bicycle parking;
- Allowance of rooftop structures supporting active, recreational rooftop uses (DTPP Section 2.7); however, there would be no changes to the permitted maximum building height;¹⁵
- Beyond the introduction of R&D Laboratory Type as a conditionally permitted use, described above, no major changes are proposed to the DTPP with respect to permitted or conditionally permitted land uses;¹⁶
- Revision to the Potential Open Space map (Section 3.2.1) to remove Little River Park and the County Parklet (Middlefield/Bradford) as open spaces while adding Library Lot A as a potential new open space, as well as adding three open spaces planned as part of Gatekeeper projects at 901 El Camino Real, 1900 Broadway, and 2300 Broadway; and
- Acknowledgement throughout the DTPP of the ongoing proposed Transit District, a separate, focused sub-area within the DTPP.

Other, more minor amendments are also proposed to the DTPP, including the following:

- Revisions to the Historic Resource Preservation Regulations (Section 2.1), including map, to acknowledge the removal, since DTPP adoption, of four historic resources, all of which had been identified in the DTPP as potentially subject to alteration, relocation, or removal. In addition, guidelines would be added for the 651 El Camino Real site (APN 052-271-030) that would permit relocation or removal of the McGarvey House (649 El Camino Real), a City-identified historical resource; and
- Revisions to the Public Frontages map (Section 2.4), Building Placement and Landscaping Regulations map (Section 2.5), Facade Composition map (Section 2.8), and Signage map (Section 2.10), to designate El Camino Real throughout the DTPP as a Boulevard

¹⁴ Any deviations from DTPP standards potentially being sought by future applicants cannot be known at this time. As a result, the environmental impacts of such a future project that does not conform to DTPP requirements would be speculative and impossible to evaluate at this programmatic level. Because the process of seeking an exception to the DTPP Standards would be discretionary, the environmental impacts of a project in the amended DTPP area seeking to take advantage of the creek/storm drain/ROW constraints exception would be analyzed as part of the CEQA process at the project level and are not further evaluated in this SEIR. Moreover, were an applicant to seek an increase in project height, a Planned Development (PD) permit would be required. The PD permit process, also discretionary, would require project-specific CEQA review.

¹⁵ As stated above, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

¹⁶ Consistent with Article 59 of the Zoning Code, Storefront Cannabis uses would be permitted in accordance with Zoning Code Article 59 and Chapter 32 of the Redwood City Municipal Code, massage businesses would be required to comply with Chapter 18A of the Municipal Code, and sexually explicit business (conditionally permitted only in the Downtown Core and Downtown General areas) would be required to comply with Chapter 18A and with Article 27 of the Zoning Code. Additionally, privately owned, publicly accessible open space would be conditionally permitted in portions of the DTPP's Entertainment District and Downtown Core that require active ground-floor uses; open space is not currently permitted in these locations.

(eliminating a short section of Downtown Core Street) and to add Roselli Mini Park (existing) and add Library Lot A as a potential new open space and delete Little River Park and the County Parklet as open spaces;

- Revisions to the Complete Streets map (Section 3.2.2) to add certain bicycle improvements;
- Minor revisions to the Potential Transit Projects map (Section 3.2.2C) to slightly modify potential future streetcar routing and certain connections across the Caltrain tracks.

All of the DTPP Plan-Wide Amendments reflect the City Council’s vision for the future of Downtown. As explained in the staff report for the August 16, 2022, Planning Commission study session, “The package of proposed DTPP Plan Wide amendments is based on the following direction:

- “1. Corrections and updates to address any factual inconsistencies;
- “2. Amendments required to facilitate the study of the proposed Gatekeeper projects within the DTPP;
- “3. Amendments to the approval process to ensure City Council discretion when considering proposed projects; and
- “4. Revisions to the DTPP to “clean up” drafting to improve the use and efficiency of the DTPP.”

These amendments are consistent with its initiation of the Gatekeeper Projects and accommodate the growth that may be proposed by the Gatekeeper Projects based on numerous study sessions and public meetings that have taken place since 2017. Thus, the proposed amendments would establish the programs and policies necessary to further the goal of meeting the existing and projected residential and office needs in the Downtown. Future proposals, including the Gatekeeper Projects, would be examined in light of the program SEIR to determine whether additional environmental review is required.

The DTPP would continue to govern the retail development potential and other permitted uses (e.g., hotels, civic uses), as well as in regard to other controls set forth in the DTPP, including, but not limited to, Historic Preservation, Use Regulations, Parking, Façade Composition, Signage, and aspects of New Streets, Public Frontage Regulations, Building Height and Massing, and Architectural Character not set forth above.

Development Assumptions

Currently, less than 5,000 square feet of office space remains in the office development cap, while fewer than 500 dwelling units remained in the residential development cap before it was proposed to be eliminated.¹⁷

¹⁷ It is anticipated that approximately 130 units from the remaining residential cap may be allocated to a project currently under City review at 1330 El Camino Real.

The DTPP Plan-Wide Amendments include increasing the office maximum allowable development cap on office square footage by 80,000 square feet, reserved specifically for small office uses, defined as “projects containing no more than 20,000 net new square feet of office uses.”

Beyond this increase in the office cap, this SEIR assumes development of additional office development of 1,087,100 square feet (total of 1,167,100 square feet including the 80,000 square feet for small offices) within the DTPP area. This SEIR also assumes an additional 830 residential units would be developed within the DTPP area. These totals are based on accommodating the potential collective development of the six Gatekeeper Projects, along with the potential future northerly expansion of the DTPP boundary and an additional 10 percent allowance for both office square footage and residential units beyond the sum of the Gatekeeper Projects and the potential boundary expansion development, to allow flexibility for consideration of subsequent development applications within the amended DTPP area. A relatively large share of the residential development increase would be set aside for affordable housing, based upon assumed developer commitments and, at a minimum, consistent with the City’s Affordable Housing Ordinance (Municipal Code Article 29). It is important to state that although this SEIR analyzes the environmental impacts of the proposed increases in office and residential development at a programmatic level, based on the projected development anticipated within the DTPP area, the actual adjustments to the office development cap and the number of residential units would be considered subsequently by the City, as part of project-specific reviews. It is noted that, because the office development cap would continue to reside in both the DTPP and the General Plan, all subsequent office development projects within the DTPP area would require both a DTPP amendment and a General Plan amendment. **Table 3-1** sets forth the proposed overall development increases.

As stated previously, this SEIR also evaluates a potential future expansion of the northern DTPP boundary by approximately 0.1 mile northward between El Camino Real and the Caltrain tracks to include the following five additional parcels shown on Figure 1: APNs 052-271-030, -040, -050, -080, and -090.

3.5.2 Circulation Improvements

As part of the DTPP Plan-Wide Amendments, the City proposes certain alterations to DTPP vehicular circulation within the DTPP area. These include the following closures of street segments (see **Figure 3-3**):

- Vacation/closure to motor vehicle traffic of the one-block segment of Hamilton Street between Broadway and Marshall Street;¹⁸
- Vacation/closure to motor vehicle traffic of the one-block segment of Broadway between Jefferson Avenue and Main Street;

¹⁸ Vacation of a street right-of-way is typically a process by which the City grants an easement to an adjacent property owner and frequently entails elimination of motor vehicle traffic on that street segment, although the right-of-way may continue to accommodate pedestrian and bicycle traffic. Closure to motor vehicle traffic typically entails the same elimination of vehicle traffic and continuation of pedestrian and bicycle traffic, but does not entail the City granting an easement or otherwise foregoing control over the right-of-way.

**TABLE 3-1
ASSUMED INCREASES IN DTPP DEVELOPMENT**

Land Use	Increase in Office and Residential Development Assumptions ^{a,b,c}
Office ^{d,e}	1,167,100 square feet
Residential	830 units

NOTES:

- ^a The assumed increase in development is informed by the Gatekeeper Projects (as initiated by the City Council for General Plan amendments, 939,000 sq. ft. of office space and 458 residential units), the additional development potential within the area of the potential future DTPP boundary extension (122,000 sq. ft. office and 271 units) and an additional 10-percent of assumed development (106,100 sq. ft. office and 100 units; additionally, the total number of units is rounded up). For the potential future boundary extension, development assumptions were made based on recently constructed and proposed projects in the Downtown area. Mixed-use development was assumed on three of the four parcels in question, and on one-third of the fourth parcel (the remainder is anticipated to be used as part of the relocated and expanded Caltrain station, a separate project), at a height of eight stories and 85 percent net-to-gross ratio. The analysis assumed three stories of office space and four stories of residential development (with units averaging 600 square feet), with about one-fifth of the ground floor to be occupied by retail space and the remainder devoted to internal pedestrian circulation (e.g., lobbies), building management and support space, and parking and vehicle circulation.
- ^b The Gatekeeper Projects also include approximately 30,000 sq. ft. of retail space, but this would replace existing retail space (to be demolished) and would neither add retail beyond existing conditions nor increase the DTPP retail development cap. Also included would be approximately 19,500 sq. ft. of space for a replacement American Legion Post No. 105 hall (11,500 sq. ft.) and a new teen center (8,000 sq. ft.), both of which are Civic Uses under the DTPP that are not subject to development caps.
- ^c Square footages and unit counts in this table are rounded, and all figures are based on available information at the time of publication.
- ^d Of the office cap, 80,000 square feet would be reserved for small office projects, defined as 20,000 net new sq. ft. or less.
- ^e Up to 30 percent of the office cap may be devoted to Research and Development Laboratory use.

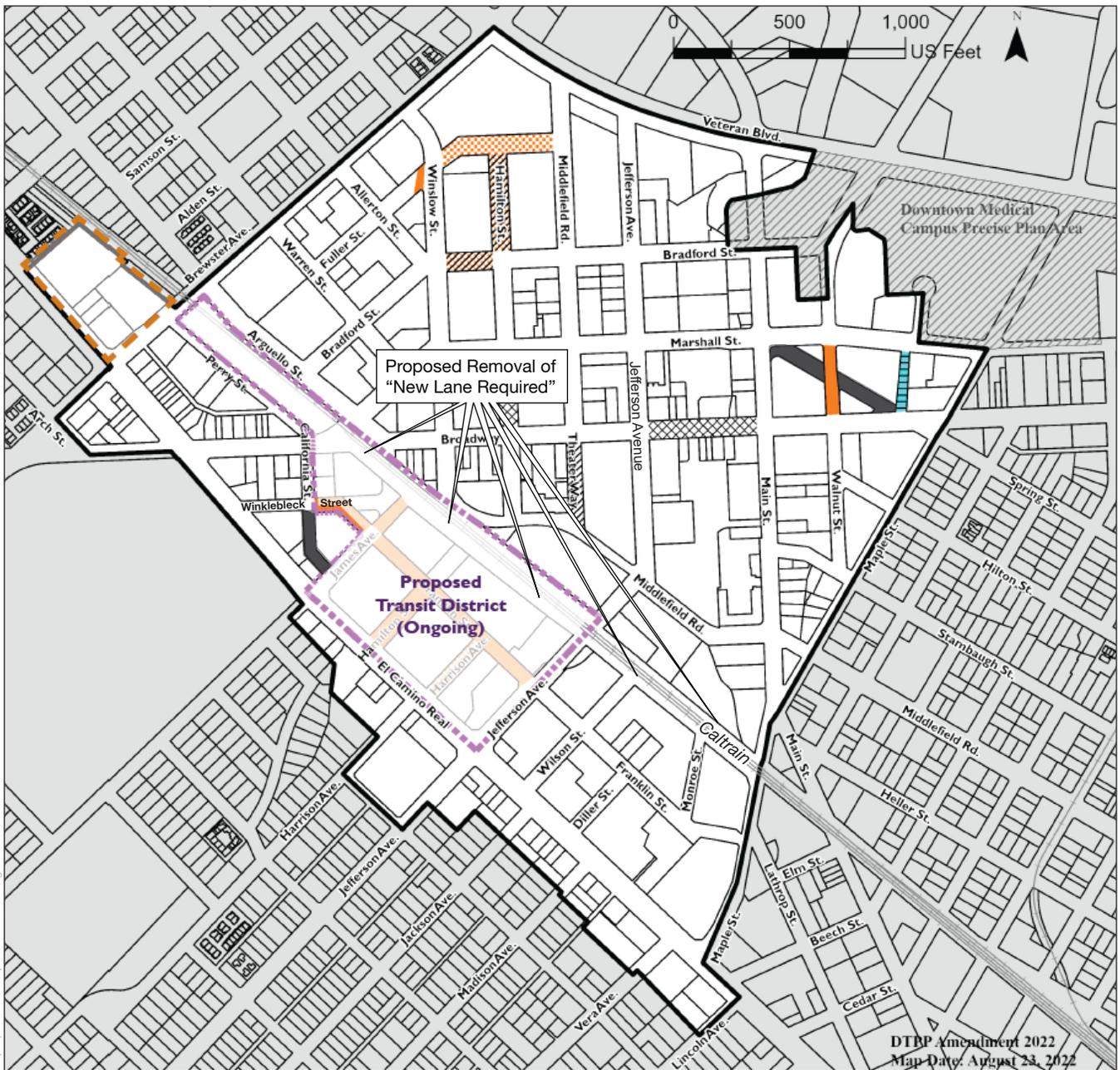
SOURCE: City of Redwood City, 2022

- Vacation of the one-block segment of Spring Street between Main and Walnut Streets;
- Conversion of Hamilton Street north of Bradford Street and of Bradford Street between Hamilton and Winslow Streets to potentially provide non-vehicular circulation, rather than being identified as required new streets (both of these segments are currently incorporated into the County Government Center); and
- Identification of Theater Way between Broadway and Middlefield Road as providing non-vehicular access, consistent with existing conditions.

The DTPP Plan-Wide Amendments may also encourage best-practice design for the closed street segments, including zoning for vacated street segments, where applicable, with respect to such features as lane width, lighting, paving, and emergency access requirements.

In addition to the foregoing, the City would abandon the portion of California Street between Winklebleck Street and James Avenue and create an extension of Franklin Street between Winklebleck Street and James Avenue. On September 13, 2021, the City Council re-initiated the proposed General Plan amendment for a revised version of the proposed project at 901 El Camino Real, under which the project site would be reconfigured through an exchange of land between Caltrain and a private entity that is proposing development of this site, along with the City's sale of a portion of California Street, participation in the street vacations, and realignment of the street grid.¹⁹ The revised street grid would allow for implementation of the DTPP's proposed Franklin Street extension between James Avenue and Winklebleck Street, continuing the DTPP's

¹⁹ As with all subsequent development projects, this project, including potential alteration of Arroyo Ojo, discussed below, would be considered by City decision-makers in a separate project-specific approval process.



DTBP Amendment 2022
Map Date: August 23, 2022

- | | | | | | |
|---|---|---|---|--|--|
|  | New City Street Required |  | Potential Non-Vehicular Access
(See 3.2.1 Potential Public Open Spaces Map) |  | Downtown Precise Plan Boundary |
|  | Recommended New City Street |  | Potential Street Abandonment
- California Street between Franklin Street and James Street.
- Spring Street between Main Street and Walnut Street.
- Spring Street between Walnut Street and Broadway. |  | Potential Future DTTP Northerly Extension |
|  | New Lane Required | | | | |
|  | Existing Non-Vehicular Hardscape | | | | |
|  | Required New Lane, already amended for DTTP in 2011.
(See Section 2.3 New Streets.) | | | | |

These sections of street abandonment were amended on the maps in 2011, and remained on the last amended DTTP Plan in 2018. Formerly, the maps in the Original DTTP only showed information related to new streets only.

2021\ND\202100421\XX - RWC both proj\02\02:100421.01 - DTTP Planwide (GK) SEIR\05 Graphics-GIS-Modeling\Illustrator

SOURCE: City of Redwood City

DTTP Plan-Wide Amendments SEIR

Figure 3-3
Proposed Revisions to DTTP New Streets Map



extension of Franklin Street north from Jefferson Avenue through the Sequoia Station shopping center site.²⁰ This realigned street grid would create better connections to the Transit Center, allow for wider sidewalks and improved pedestrian sight angles, and provide a new four-way stopped-controlled intersection.

This parcel reconfiguration and change in the circulation network would be consistent with the circulation network that was included in the DTPP and evaluated in the Final EIR for the DTPP, certified in 2011. The subsequent development project at 901 El Camino Real that would be the subject of this parcel reconfiguration could ultimately entail relocating and altering approximately 170 feet of existing culvert and approximately 170 feet of existing open creek (Arroyo Ojo, a small creek that is otherwise completely culverted within downtown Redwood City) and providing a replacement public open space that otherwise meets the DTPP purpose and goals. Under this proposal, the northernmost portion of the existing daylighted creek would be placed in a culvert, while the existing culverted portion of the creek, between California Street and El Camino Real, would be relocated and daylighted.

The DTPP Plan-Wide Amendments also propose pedestrian, bicycle, and transit enhancements to improve safety and connectivity to and from the potential future relocated Transit Center, including an expanded Caltrain Station, and the greater Downtown and surrounding neighborhoods. Among these would be a requirement for protected bike lanes and potential improvements to bus loading along El Camino Real, protected bike lanes on part of Brewster Avenue, and bicycle improvements on Broadway, Jefferson Avenue, Middlefield Road, Maple Street, Main Street, Winslow Street and Veterans Boulevard. Widened sidewalks and protected pedestrian crossings would also be provided on certain designated streets. These pedestrian, bicycle, and transit improvements would be consistent with the circulation plan set forth in the DTPP, with minor exceptions.

3.6 Uses of the EIR and Required Approvals

3.6.1 City of Redwood City

The City of Redwood City is the lead agency under CEQA for preparation of the proposed DTPP Plan-Wide Amendments environmental analysis. This SEIR is intended to provide the City, other public agencies, and the general public with the relevant environmental information needed to consider the proposed DTPP Plan-Wide Amendments. Like the programmatic DTPP Final EIR certified in 2011, this program SEIR analyzes General Plan and DTPP amendments that would, if adopted, govern future development in the amended DTPP area. Future proposals, including the Gatekeeper Projects, would be examined in light of the program SEIR to determine whether additional environmental review is required. The City anticipates using a checklist or similar approach to determine whether the environmental effects of future development proposals are within the scope of the program SEIR, as described in CEQA Guidelines Section 15168(c)(2), or further review is required.

²⁰ Sequoia Station is the subject of a separate mixed-use redevelopment project.

The City anticipates that implementation of the DTPP Plan-Wide Amendments would require the following discretionary approvals by the City of Redwood City:

- Certification of the Final SEIR
- Adoption of a Mitigation Monitoring or Reporting Program
- Adoption of General Plan amendments to implement the DTPP Plan-Wide Amendments (other than the currently proposed amendment of the DTPP maximum allowable development to add 80,000 square feet of office capacity specifically reserved for small offices, revision of the maximum allowable development caps would be considered as part of subsequent project-specific reviews)
- Adoption of DTPP amendments, including, but not necessarily limited to, the following:
 - Amendments to permitted uses including allowing Research and Development Laboratory space as a conditional use;
 - Amendments to minimum height and massing regulations, including allowance of rooftop structures supporting active, recreational rooftop uses (but no changes to the permitted maximum building height);²¹
 - Amendment of the maximum allowable development cap for office development to add 80,000 square feet specifically reserved for small office projects (of 20,000 net new square feet or less);
 - Revisions to the DTPP new streets (circulation) regulations and associated revisions to DTPP maps, as well as to update the typology of some streets and, potentially, eliminate some planned but unbuilt streets;
 - Revisions to certain of the DTPP parking regulations, to lower the parking requirement to reflect actual demand, current best practices, and future plans for Caltrain track expansion that will encourage non-driving modes of transportation while continuing to incentivize shared parking, and to increase bicycle parking requirements; and
 - Allowance for exceptions to mandatory building placement, stepdown zone, and minimum building height standards in the DTPP Development Regulations for sites identified as potentially providing privately owned publicly accessible open space that is identified on the Potential Public Open Space Map in DTPP Section 3.2.1 and for sites that are constrained by potential anticipated Caltrain track improvements and realignment, as identified on the Potential Transit Projects Map (DTPP Section 3.2.3), or physically constrained by creek or stormwater features as identified on the Potential Public Open Space Map (Section 3.2.1).²²
- Vacation, closure and realignment of City streets and parklets, and provide zoning and standards for the closed streets, where necessary.

²¹ As stated above, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet. This approval would be considered as part of a subsequent project-specific action. This extension, if approved, would require amendment of the Zoning Map.

²² As explained above in footnote 14, p. 3-10, the location(s) of any potential use of these exception(s) would be the subject of project-specific Planned Development permits that would undergo CEQA review at such time as a project applicant were to apply for such exception(s). Therefore, it would be speculative to attempt analysis of such exceptions(s) and therefore these exception(s) are not further evaluated in this SEIR.

- Subsequent project specific entitlements, including, but not limited to Precise Plan Permits, Tentative Tract Maps, Architectural Permits, Development Agreements, and, potentially, additional General Plan and DTPP amendments and, where applicable, Zoning Map revisions.

3.6.2 Other Government Agency Approvals

Amendment of the General Plan and DTPP to implement the DTPP Plan-Wide Amendments is not anticipated to require review and/or approval from other jurisdictional agencies, with the potential exception of circulation improvements. However, if the land exchange involving 901-999 El Camino Real proceeds, approval could be required from Caltrain, the San Francisco Bay Regional Water Quality Control Board, U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and/or the U.S. Department of Fish and Wildlife, given that this action could ultimately entail modifications to Arroyo Ojo, an existing creek. Additionally, the amendments would require review by City/County Association of Governments of San Mateo County with respect to a determination of consistency with the Airport Land Use Compatibility Plan for the San Carlos Airport. Further, individual projects could require permits from the Bay Area Air Quality Management District and/or Caltrans.

CHAPTER 4

Land Use and Planning

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on land use and planning, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

The DTPP Final EIR found that the DTPP would not physically divide an established community, conflict with existing land use, or substantially conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating and environmental effect. This impact was determined to be less than significant, and no mitigation was required.

4.1 Environmental Setting

4.1.1 Regional and Citywide

Redwood City is located in the San Francisco Bay Area's Peninsula subregion, approximately 25 miles south of San Francisco, and approximately 20 miles north of San Jose. Redwood City is bordered on the east by the San Francisco Bay, on the west by the Santa Cruz Mountains, on the north by the cities of San Carlos, Belmont, and Foster City and unincorporated areas of San Mateo County; and on the south by the cities of Menlo Park and Atherton and unincorporated San Mateo County. The City's Downtown area includes the Redwood City Transit Center, which includes a Caltrain station that provides regional commuter rail transit service between San Francisco and Gilroy, a distance of 77 miles, as well as SamTrans, which provides local bus access within the peninsula. Regional automobile access to Redwood City is provided by U.S. 101 and Interstate 280.

Most of Redwood City's office, commercial, and residential uses are located west of U.S. 101, and the majority of open space and industrial uses are located east of U.S. 101. Older central neighborhoods surround Downtown, and newer outlying residential neighborhoods are located toward the periphery. Other notable land uses include the Redwood Shores planned community; light/industrial research and development areas; heavy industrial uses at the Port of Redwood City; and public/institutional uses, including parks, schools, and community centers.

4.1.2 Downtown Land Uses

Downtown contains the City’s most urban district. It fits into a roughly 0.25-mile radius, which the DTPP describes as a pedestrian-friendly, walkable district with access to transit amenities. Downtown contains entertainment, retail, office, residential, institutional, and other commercial uses. Downtown is also the civic center of Redwood City and contains the City Hall, County Courthouse building, County Government Center, library, post office, county historic museum, theaters and other entertainment venues. As of June 2021, there were approximately 2,851,508 square feet of non-residential uses, 2,899 residential units, and 100 lodging units within the current DTPP area.

**TABLE 4-1
EXISTING LAND USES IN THE DTPP AREA**

Land Use	Existing (2021)	
	Amount	Unit
Commercial/Retail	1,157,000	sf
Office	1,694,508	sf
Residential	2,899	Dwelling units
Lodging	100	Rooms
TOTAL Non-residential	2,851,508	sf

NOTES:

^a sf = square feet

SOURCE: The City of Redwood City, February, 2022

4.1.3 Land Uses Adjacent to and Surrounding the DTPP

The current DTPP area is bordered on three sides by residential neighborhoods: Mezesville on the northwest, Sequoia on the southwest, Central on the southwest, and Stambaugh-Heller on the southeast. The area to the northeast comprises mostly commercial and research and development uses. The four neighborhoods surrounding the current DTPP area are described below:

- The Mezesville neighborhood is northwest of the DTPP area, across Brewster Avenue. This neighborhood contains primarily low-density residential development.
- The Sequoia neighborhood is southwest of the DTPP area, across El Camino Real between Whipple Avenue and Jefferson Avenue. This neighborhood contains primarily low- to medium-density residential uses, as well as commercial uses. In addition, this area contains Sequoia High School, which comprises an entire city block.
- The Central neighborhood is southwest of the DTPP area, across El Camino Real between Jefferson Avenue and Redwood Avenue. This neighborhood primarily contains duplexes and 2- to 4-story apartment buildings.
- The Stambaugh-Heller neighborhood borders the DTPP area on the southeast, between El Camino Real and Veterans Boulevard. This residential neighborhood contains 1- to 2-story single-family homes and 2-story apartment buildings.

4.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR. DTPP EIR Chapter 4, *Land Use and Planning*, Section 4.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

4.2.1 City of Redwood City General Plan

The City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. Goals and policies relevant to land use and planning include the following:

- *Goal BE-2*: Recognize, maintain, and celebrate the unique qualities of Redwood City’s neighborhoods.
- *Policy BE-2.4*: Provide opportunities for housing development at a range of densities and housing types that provide various choices for current and future residents.
- *Policy BE-2.5*: Protect neighborhoods from the encroachment of incompatible activities or land uses that may have a negative impact on the residential living environment.
- *Policy BE-11.3*: Plan for and accommodate mixed-use projects along corridors, where a site or sites are developed in an integrated, compatible, and comprehensively planned manner involving two or more land uses. Combine residential and office uses with commercial development to reduce automobile trips and encourage walking, and facilitate compact, sustainable development.
- *Policy BE-11.4*: Promote mixed-use developments that include higher-density residential units that transition sensitively with adjacent lower- density residential uses.
- *Policy BE-11.7*: Provide the appropriate density and intensity of land uses to facilitate high levels of transit use along corridors.
- *Policy BE-11.11*: Explore establishing minimum development intensities and/or heights along primary corridors.
- *Goal BE-12*: Transform the El Camino Real Corridor into a “Grand Boulevard” that supports walking, transit, bicycling, and economic development.
- *Policy BE-12.1*: Integrate land use and transportation planning and development to transform El Camino Real to an urban, pedestrian-friendly, and transit-oriented boulevard for residents to live, work, shop and play.
- *Policy BE-12.2*: Encourage the replacement of older low-scale, auto-oriented development with well-designed new projects that offer pedestrian orientation, higher densities with more efficient use of land, and continued productive economic value.
- *Policy BE-12.5*: Provide vibrant public spaces and gathering places along the El Camino Real Corridor.

- *Goal BE-16:* Re-create Broadway as a multi-modal Corridor that links Downtown to properties across Woodside Road.
- *Policy BE-16.1:* Pursue new land use approaches along the different segments of the Broadway Corridor consistent with the Land Use Map. These land use approaches are designed to encourage development at an intensity and pattern that supports a street car transit system.
- *Policy BE-16.2:* Prepare and implement a streetscape plan to create a stronger entrance into Downtown and to integrate the diverse size and scale of the commercial and mixed-use activities.
- *Policy BE-18.1:* Adopt and implement the new Downtown Precise Plan.
- *Policy BE-18.2:* Allow for a range of uses, building types, and building heights, to promote diverse mixed-use development, pedestrian activity, and a vibrant city center.
- *Policy BE-18.5:* Encourage development and growth in the Downtown such that it serves as the city’s major center of local and regional-serving retail, including encouraging relocation of retail into the Downtown core.
- *Policy BE-18.6:* Continue to foster pedestrian-oriented redevelopment in areas surrounding the Caltrain Station. Prioritize redevelopment of the Middlefield Parking Lot and other public owned land in the vicinity to support Downtown activity.
- *Policy BE-18.7:* Pursue mixed-use housing and commercial development in Downtown that includes a range of housing options and affordability levels.
- *Policy BE-18.8:* Provide the amenities and range of entertainment, shopping, and cultural offerings that will make Downtown a vital regional and local destination.
- *Policy BE-18.9:* Create a network of attractive, interesting public places and spaces that encourage walking and lingering through connections to Broadway, adjacent neighborhoods, transit, and El Camino Real.

The current DTPP area is located in the MU–D (Mixed Use – Downtown) General Plan land use district. The area proposed to be added to the DTPP has a General Plan designation of MU-C (Mixed Use – Corridor) and is currently located within the Mixed Use Corridor – El Camino Real (MUC-ECR) zoning designation.

4.2.2 Redwood City Zoning Code

In most of the City, the Redwood City Zoning Code (Zoning Code) implements the General Plan and establishes specific standards for the use and development of properties, regulating development intensity using methods such as minimum lot size and setbacks, maximum lot coverage, height, and floor area ratio. Within the amended DTPP area, the DTPP and not the Zoning Code provides applicable land use controls and development standards.¹

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

The DTPP Plan-Wide Amendments would also modify development standards, as discussed below. Additionally, this SEIR evaluates a potential future extension of the northern DTPP area boundary; if ultimately approved, this extension would necessitate a Zoning Map revision.

4.2.3 Redwood City Downtown Precise Plan (DTPP)

The DTPP controls land use and development regulations in Downtown Redwood City. The DTPP imposes “standards” (mandatory) and “guidelines” (permissive) to guide new development, including permitted land uses; density of buildings and structures;² building heights and disposition; architectural character (including façade design and composition); site design and planning (including building placement, parking, and landscaping); signage; public frontages, streets, and streetscapes; and preservation and maintenance of historic resources.

While the entire downtown is intended to be a lively, mixed-use area, the DTPP is broken into “Use Zones,” which include the following: Entertainment District; Downtown Core; Downtown General; and a sub-zone for required active ground floor uses. In general, the Entertainment District and Downtown Core zones are along Broadway, El Camino Real, and Middlefield Road, with the Downtown General zone comprising the rest of the amended DTPP area.

Entertainment Use District

The Entertainment Use District is intended to be the focus of entertainment and major retail activity and the most intense street life. Permitted uses in this district include general retail, neighborhood retail, personal & business services, office, general residential, lodging, and live-work. Conditionally allowed uses include entertainment, public open space, civic uses, and restricted uses.³

Downtown Core Use District

Permitted uses in the Downtown Core and Downtown General districts include general retail, neighborhood retail, personal & business services, office, general residential, lodging, live-work, and civic uses. Conditionally allowed uses include entertainment, public open space, and restricted uses.⁴

Downtown General Use District

Permitted uses in the Downtown General Use District include neighborhood retail, personal and business services, office, workshop, general residential, specialized residential,⁵ lodging, live-work, and civic uses. Conditionally permitted uses include general retail, entertainment, public open spaces, and restricted uses.

² It should be noted that the DTPP applies form-based code, which regulates land development to achieve a specific urban form rather than separation of uses. The DTPP establishes density for the entire DTPP rather than on a site-by-site basis.

³ Restricted uses include liquor stores, sexually-oriented businesses, and bail bond offices, among others.

⁴ Restricted uses include liquor stores, sexually-oriented businesses, and bail bond offices, among others.

⁵ Examples of specialized residential uses are assisted living facilities, senior housing, boarding houses and dormitories.

4.2.4 14 CFR Part 77—Safe, Efficient Use, and Preservation of the Navigable Airspace

The amended DTPP area is located about 1.6 miles south of the San Carlos Airport and the Federal Aviation Administration (FAA) is tasked with managing the national airspace. The FAA has promulgated regulations at Code of Federal Regulations (CFR) Title 14, Part 77 (Part 77), to preserve the navigability of the nation’s airspace and maintain its safe and efficient use. The Part 77 regulations establish requirements for notifying the FAA of certain types of proposed construction or alteration of already existing structures. In addition, Part 77 identifies the standards used to determine obstructions to air navigation, and the process for conducting aeronautical studies to identify obstructions to air navigation and their effect on airspace.

Under 14 CFR Part 77.9, the FAA requires that it be notified of certain types of construction. This includes any construction of a new structure or alteration of an existing structure that is more than 200 feet above ground level where it is located, or that would exceed certain imaginary surfaces extending outward and upward from an airport’s runways.⁶ The FAA is notified by submitting Form FAA 7460-1, Notice of Proposed Construction or Alteration, at least 45 days before the beginning of construction.⁷ It should be noted that the tallest buildings allowed pursuant to the DTPP Plan-Wide Amendments would be 136 feet, which is the same as under the current DTPP.

In response to the submittal of Form 7460-1, the FAA will prepare an aeronautical study to identify whether the proposed construction or alteration would be considered an obstruction to air navigation. Obstructions in airspace are presumed to be hazards to air navigation unless the aeronautical study concludes otherwise. The standards for determining obstructions in airspace are established in 14 CFR Part 77.17.

Upon completion of the aeronautical study, the FAA will either issue a Determination of No Hazard to Air Navigation or a Determination of Hazard to Air Navigation. A Determination of No Hazard to Air Navigation may include certain additional information, such as supplemental notice requirements or recommendations for marking and lighting the structure consistent with guidance in FAA Advisory Circular 70/7460-1L Change 2, Obstruction Marking and Lighting. A Determination of Hazard to Air Navigation indicates that a structure would have a substantial impact on air navigation. Part 77 also includes provisions for petitioning the FAA for discretionary review of a project. The DTPP Final EIR Chapter 14, *Hazards and Hazardous Materials*, contains a discussion of safety hazards related to airports.

4.2.5 California State Aeronautics Act

The California Department of Transportation (Caltrans) Division of Aeronautics is responsible for administering much of the California State Aeronautics Act (Public Utilities Code Section 21001 et seq.). The State Aeronautics Act requires counties, with certain exceptions, to

⁶ The notification requirement includes both permanent structures and temporary structures such as tower cranes used in construction.

⁷ Federal Aviation Administration, Form FAA 7460-1, *Notice of Proposed Construction or Alteration*, Section 77.9, Construction or Alteration Requiring Notice, 2017. Available at https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_042020.pdf. Accessed February 6, 2022.

form airport land use commissions (ALUCs) (Public Utilities Code Section 21670(b)). The purpose of an ALUC is to conduct airport land use compatibility planning and to prevent the creation of new noise and safety problems in areas surrounding airports.

One of the primary responsibilities of ALUCs is to prepare airport land use compatibility plans (ALUCPs). The State Aeronautics Act directs the Caltrans Division of Aeronautics to provide guidance for ALUCs in preparing ALUCPs by publishing the Caltrans *California Airport Land Use Planning Handbook* (Caltrans Handbook).⁸ The Caltrans Handbook was last updated in October 2011.

The Caltrans Handbook is intended to provide information on compatible land use planning to ALUCs, their staff, airport proprietors, cities, counties, consultants, and the public; identify the requirements and procedures for preparing effective compatibility planning documents; and define exceptions where applicable.⁹ The Caltrans Handbook is to be used by all ALUCs responsible for providing compatible land use planning near each existing and new public-use or military airport within their jurisdictions. Although the Caltrans Handbook provides guidance for complying with baseline safety and compatibility requirements, ALUCs may choose to be more restrictive based on local conditions.

Public Resources Code Section 21096 states that if a lead agency prepares an EIR for a project situated within ALUCP boundaries, the Caltrans Handbook is to be used as a technical resource to assist in preparation of the EIR to the extent that the EIR analyzes airport-related safety hazards and noise problems. The amended DTPP area is within the *Airport Influence Area* (AIA) for the San Carlos Airport; therefore, California State Aeronautics Act applies to subsequent projects proposed within the amended DTPP area.

4.2.6 Comprehensive Airport Land Use Compatibility Plan for the San Carlos Airport

The City/County Association of Governments of San Mateo County prepared the state-mandated ALUCP for the environs of San Carlos Airport.¹⁰ The City/County Association of Governments (C/CAG) of San Mateo County develops ALUCPs to encourage compatible land uses in the vicinity surrounding an airport by providing for the “orderly growth of each public airport and the area surrounding the airport” while safeguarding “the welfare of the inhabitants within the vicinity of the airport and the public in general.”¹¹

⁸ California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011.

⁹ California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011, p. vii.

¹⁰ ESA Airports, 2015 (October). Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport. Prepared for the City/County Association of Governments of San Mateo County. Available at: https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf. Accessed February 3, 2022.

¹¹ Ibid.

The ALUCP provides applicable policies with regard to Noise Restriction, Height Restriction, Safety Restriction, and Overflight Restriction Areas around the Airport. The amended DTPP area is not within any noise contours for the San Carlos Airport.

The *Height Restriction Area* represents height restrictions in areas covered by imaginary airspace surfaces at and around the Airport, as defined by criteria promulgated in 14 CFR Part 77. Development of the height restriction policies also considered height restrictions associated with one-engine-inoperative minimum clearance surfaces, as defined by performance criteria established in 14 CFR Part 25.121.¹² The FAA has no authority over local land use; therefore, the height restriction policies provide a nexus between federal regulations and local land use planning.

The *Safety Restriction Area* comprises six safety zones developed based on guidance provided in the 2002 Caltrans Handbook. The safety zones represent areas of progressive risk for aircraft accidents. The safety policies in the ALUCP apply in areas located within the safety zones. Like the noise policies, the safety policies include criteria determining the acceptability of specific land uses based on the safety zone. The compatibility criteria limit maximum population density and include requirements for maintaining various percentages of open space based on safety zone. A portion of the amended DTPP area is located within Safety Zone 6.

Finally, the *Overflight Restriction Area* covers all areas within the AIA. Aircraft overflight policies address sensitivity to aircraft overflights beyond the noise contours. The overflight policies require avigation easements for certain types of projects and apply state law requiring disclosure of a property's location within an AIA as part of the sale of residential real estate.¹³

The amended DTPP area is within both Area A and Area B of the AIA. Discretionary actions such as the proposed Plan-Wide Amendments must be reviewed by the C/CAG for a determination of the consistency of the proposed land use policy action(s) with the ALUCP. This must occur prior to adoption by the City Council of Redwood City.

For additional discussion of the ALUCP, including consistency with policies related to noise and safety, refer to Chapter 11, *Noise and Vibration*, and to the DTPP Final EIR.

4.2.7 Plan Bay Area 2050

SB 375 requires all metropolitan regions in California to complete a Sustainable Communities Strategy (SCS) as part of a regional transportation plan. In the Bay Area, the MTC and ABAG are jointly responsible for developing and adopting an SCS that integrates transportation, land use, and housing to meet GHG reduction targets set by the California Air Resources Board.

¹² On March 12, 2019, the City of San José City Council accepted the completed Downtown Airspace and Development Capacity Study, selecting Scenario 4, which would affirm the City's development policy to use FAA Terminal Instrument Procedures (TERPS) surfaces in lieu of the One-Engine Inoperative (OEI) surfaces to determine maximum building heights in the Downtown Core and Diridon Station planning areas.

¹³ An avigation easement grants the right of overflight in the airspace above or near an affected property.

Plan Bay Area 2050, adopted in October 2021, serves as the SCS for the Bay Area, in accordance with SB 375.¹⁴ *Plan Bay Area 2050* is comprised of 35 strategies across the elements of housing, the economy, transportation, and the environment. A core household and employment growth strategy of *Plan Bay Area* is “focused growth” in existing communities along the existing transportation network. Key to implementing this focused growth strategy are Priority Development Areas (PDAs) and Transit-Rich Areas (TRAs), as recommended and approved by local governments. As defined by the plan, PDAs are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. *Plan Bay Area* also recommends increasing non-auto travel mode share and reducing vehicle miles traveled per capita and per employee by promoting transit-oriented development, transit improvements, and active transportation modes such as walking and bicycling.

The amended DTPP area is located within the “Redwood City Downtown” PDA. This means it is located within an existing community, within one-half mile of frequent transit, and in an area planned for future housing and job growth by the City and the regional agencies. The amended DTPP area is also within a TRA (although MTC mapping focuses on identifying TRAs that, while outside of identified PDAs, are nevertheless proximate to high-frequency transit).

Prior to *Plan Bay Area 2050*, *Plan Bay Area 2040*, adopted in 2017, was the most recent regional transportation plan and sustainable communities strategy for the Bay Area region. *Plan Bay Area 2050* updates *Plan Bay Area 2040* and is consistent with the current Regional Housing Needs Allocation cycle. However, since *Plan Bay Area 2050* was adopted in late 2021, *Plan Bay Area 2040* continues to serve as the basis for county-wide transportation models until the models are updated, and its data are relied upon here for internal consistency. Updates to the models are anticipated within the next several years.¹⁵

4.3 Impacts and Mitigation Measures

4.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe land use and planning impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

4.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- a) physically divide an established community; or

¹⁴ Association of Bay Area Governments, *Plan Bay Area 2050*, Final, adopted October 21, 2021.

¹⁵ There is typically a time lag of at least a year or two between the release of updated regional growth projections and the incorporation of these projections into county and sub-regional transportation models, such as the travel demand model used in this analysis.

- b) 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.

At the time the DTPP Final EIR was prepared, Appendix G of the CEQA Guidelines included the following threshold, “Be incompatible with existing land use in the vicinity.” However, in December 2018, this threshold was removed from Appendix G of the CEQA Guidelines to reflect recent changes to the CEQA statutes and court decisions.

Therefore, this section does not evaluate physical environmental impacts associated with compatibility or potential plan conflicts in detail. Instead, the various environmental resource evaluations elsewhere in this SEIR chapter discuss the potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts. For example: Land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions may be undesirable when they intrude on places used for residential activities (e.g., residences, parks). Thus, certain industrial or commercial uses—which can produce noise and odors—may not be considered compatible with residential, educational, or healthcare uses, unless buffers, landscaping, or screening could protect residents from health hazards or nuisances. Potential impacts associated with any such potential land use incompatibilities are addressed in the applicable environmental resource sections elsewhere in this SEIR (e.g., the chapters concerning Air Quality, Noise, Transportation), rather than in this chapter.

Similarly, the determination of a significant impact—which, by definition, must involve a physical change—is separate from the legal determination of plan consistency. Thus, the analysis in Impact LU-2 focuses on the DTPP Plan-Wide Amendments’ potential for a substantial conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, where the identified conflict would result in a significant environmental impact.

4.3.3 Impacts and Mitigation Measures

As described in Chapter 3, *Project Description*, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP. Specifically, this EIR assumes an additional 1,167,100 net new square feet of office space compared to the DTPP EIR and is anticipated to result in an additional 830 dwelling units. This amount of development would be consistent with that proposed by the six Gatekeeper Project sites and assumed for the potential future northerly boundary expansion, plus 10 percent. The DTPP Plan-Wide Amendments would also permit certain exceptions to building placement, required minimum height, and height stepdown zones, and would allow rooftop structures that support active, recreational rooftop uses, although the currently permitted maximum building heights would not change.¹⁶ Overall, impacts

¹⁶ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

related to land use and planning would be the same under the DTPP Plan-Wide Amendments as the DTPP EIR for reasons described below, and would not be new or more severe.

Impact LU-1: Implementation of the DTPP Plan-Wide Amendments would not physically divide an established community. (*Less than Significant*)

The DTPP Final EIR found that the DTPP would reinforce, with no substantial change in, established community-wide land use patterns. The DTPP Final EIR found that implementation of the DTPP would result in beneficial environmental effects related to division of an established community because it would “...encourage Downtown area infill activity, with significant beneficial land use effects in revitalizing the City’s historic Downtown; facilitate development where services and infrastructure can be most efficiently provided by promoting higher residential densities near or within an existing shopping, service, employment, and public transportation center; and promote compact, transit-accessible, pedestrian-oriented, mixed use development patterns and land reuse.” No mitigation measures were necessary.

Under CEQA, physical division of an established community generally applies to projects, such as highway construction, that would create a barrier that would physically sever two or more connected parts of a community.¹⁷ This CEQA criterion is not intended to apply to effects that may create a perceived barrier, such as increased traffic, or create a challenge to crossing a street, or other real or perceived inconveniences.

The DTPP Plan-Wide Amendments would not include physical barriers or obstacles to circulation that would restrict existing patterns of movement between the amended DTPP area and the surrounding neighborhoods, although changes to the existing railroad corridor and at-grade railroad crossing are being planned as separate projects, as discussed in Chapter 17, *Cumulative Impacts*.

The DTPP Plan-Wide Amendments would include features designed to encourage and promote public access, improve vehicular, bicycle and pedestrian circulation, where limited access exists today, and encourage alternative modes of transportation besides automobile. Specifically, the DTPP Plan-Wide Amendments would involve street vacations/closures that create a more pedestrian-oriented environment Downtown. The street vacations/closures would not impede vehicular traffic because of the grid circulation network across Downtown that would allow cars to reroute their trips with only minor detours. These street closures, pedestrian, bicycle, and transit improvements would generally be consistent with the circulation plan set forth in the DTPP.

The DTPP Plan-Wide Amendments would reinforce existing land use patterns by allowing for infill development in the amended DTPP area, including within the assumed potential future extension of the Plan boundary. Similarly, the DTPP Plan-Wide Amendments would increase connectivity in and around Downtown via the improvements described above and would not physically divide an established community. Thus, impacts from the DTPP Plan-Wide Amendments would generally be beneficial, which would be the same as the DTPP Final EIR and

¹⁷ “We believe, however, that this guideline was intended to apply to projects, such as highway construction, that would constitute physical barriers dividing a community.” *Cathay Mortuary, Inc. v. San Francisco Planning Commission* (207 Cal. App. 3d 275), January 20, 1989.

would not result in new or more severe impacts than those identified in the Final EIR. Therefore, this impact would be *less than significant*.

Mitigation: None required.

Impact LU-2: Implementation of the DTPP Plan-Wide Amendments would not 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. (*Less than Significant*)

The DTPP Final EIR found less-than-significant impacts related to conflicts with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

The criterion for determining significance with respect to a land use plan emphasizes conflicts with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. This criterion recognizes that an inconsistency with an individual plan, policy, or regulation does not necessarily equate to a significant physical impact on the environment unless that plan or policy is specifically intended to avoid or mitigate an environmental impact.

Applicable regional and local land use plans related to development within the amended DTPP area include Plan Bay Area 2050, the ALUCP, the General Plan, the DTPP, and the Zoning Code. Because the DTPP Plan-Wide Amendments are by definition an amendment of the DTPP and the General Plan, no conflicts with these local plans would occur.

Plan Bay Area 2050

Plan Bay Area 2050 integrates transportation, land use, and housing to meet GHG emissions reduction targets for the San Francisco Bay Area. With regard to land use, *Plan Bay Area 2050* focuses growth and development in PDAs and TRAs, which are served by public transit and have been identified as appropriate for additional, compact development.¹⁸ The amended DTPP area is located within the Redwood City Downtown PDA.^{19,20}

The DTPP Plan-Wide Amendments would not conflict with *Plan Bay Area 2050* because the Amendments are assumed to, indirectly, result in increased density and circulation improvements in close proximity to the Redwood City Transit Center. The compact growth pursuant to the plan would occur within a PDA included in Plan Bay Area 2050, which would further the objectives set forth for PDAs in *Plan Bay Area 2050*. In addition, the amended DTPP area is near a high-quality transit corridor (El Camino Real), and in an area planned for future housing and job growth. Thus, the DTPP Plan-Wide Amendments would implement and not conflict with *Plan*

¹⁸ Association of Bay Area Governments, *Plan Bay Area 2050*, Final, adopted October 21, 2021.

¹⁹ Metropolitan Transportation Commission, Priority Development Areas, MTC Open Data Layer Library, September 20, 2021, Available: <https://arcg.is/0aKuL9>. Accessed February 5, 2022.

²⁰ As noted above, *Plan Bay Area 2040* continues to serve as the basis for county transportation models, such as the model used in this analysis, because of the time needed to incorporate updated regional growth projections into sub-regional transportation models, and is relied upon here for consistency.

Bay Area 2050, including its Sustainable Communities Strategy goals of supporting sustainable growth through a more consolidated, compact development pattern that encourages new density and intensity in infill opportunity areas accessible to a multitude of transportation options, including transit. For this reason, the impact related to Plan Bay Area 2050 would be ***less than significant***. Plan Bay Area 2050 was adopted in 2021, thus, consistency with *Plan Bay Area 2050* was not analyzed in the DTPP Final EIR.

Comprehensive Airport Land Use Compatibility Plan for the San Carlos Airport

The amended DTPP area lies within the AIA for the San Carlos Airport, although no portion of the area is located within a noise contour. Since the AIA overlaps the amended DTPP boundary, development pursuant to the DTPP Plan-Wide Amendments would be required to comply with applicable policies in the ALUCP for the San Carlos Airport, including airspace protection policies, overflight policies, safety compatibility policies, airspace protection policies, overflight policies, and AIA policies.

Consistent with policies in the ALUCP, the DTPP Plan-Wide Amendments would not conflict with ALUCP policies pertaining to structure heights because proponents for all proposed developments will be subject to the requirements of 14 CFR Part 77 and required to submit Form 7460-1, *Notice of Proposed Construction or Alteration*, to the FAA for structures above a certain height. This would initiate preparation of an aeronautical study to determine whether specific development would include components that would obstruct airspace and potentially operate as hazards to air navigation.

The State Aeronautics Act requires local agencies with jurisdiction over land in an AIA that propose to amend a general plan or specific plan, or to adopt or approve a zoning ordinance or building regulation, to submit the proposed action to the ALUC of the C/CAG for a determination of consistency with the ALUCP prior to issuing a permit for the development (Public Utilities Code Section 21676.5(a)). This requirement is reflected in ALUCP Section 3.3.1, which assigns the C/CAG the responsibility for reviewing all proposed amendments to determine whether they are consistent or inconsistent with the ALUCP.

The ALUC of the C/CAG makes a determination of whether a project is consistent with the ALUCP when it reviews the General Plan and Plan-Wide Amendments. If the Airport Land Use Commission finds that the Plan-Wide Amendments would be inconsistent with the ALUCP policies, the City Council may adopt a resolution by two-thirds majority vote to override the ALUCP determination, if it makes specific findings that the proposed action is consistent with the purposes of the enabling statute (refer to Public Utilities Code Section 21670(2)). Based on the foregoing, the DTPP Plan-Wide Amendments would not obviously or substantially conflict with the ALUCP. This impact would be the same as the DTPP Final EIR and would not result in new or more severe impacts than those identified in the Final EIR. This impact would be ***less than significant***.

General Plan and Downtown Precise Plan (DTPP)

The General Plan, adopted in 2010, envisioned Redwood City growing by 9,103 housing units and 28,002 jobs by 2030. Subsequently, the DTPP, adopted in 2011, envisioned Downtown growing by 2,500 housing units and 1,300 jobs by 2030. The DTPP did not change the overall number of housing units and jobs envisioned in the General Plan for the City.

As described under the heading “Direct Population Growth” in Chapter 5, *Population and Housing*, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP. In addition, the DTPP Plan-Wide Amendments would include changes to certain development standards, guidelines and policies, including but not necessarily limited to allowing Research and Development Laboratory space as a conditional use; amending height and massing regulations to permit limited exceptions to standards such as building placement, required minimum height, and height stepdown zones, and to allow rooftop structures that support active, recreational rooftop uses (but not alter the permitted maximum building height); and parking ratios and circulation policies. Finally, this SEIR assumes a potential future extension the boundary of the DTPP area approximately 0.1 miles northward to include five additional parcels between El Camino Real and the railroad tracks.

As an amendment to the DTPP, the DTPP Plan-Wide Amendments would not conflict with the plan. The DTPP Plan-Wide Amendments would involve pedestrian-oriented improvements such as street vacations/closures. These street closures, pedestrian, bicycle, and transit improvements would generally be consistent with the circulation plan set forth in the DTPP.

In addition, the DTPP Plan-Wide Amendments would advance goals related to “place-making” along major corridors and in centers through mixed-use development to support office, residential and retail uses along two major corridors, El Camino Real and Broadway. The increased development intensity would also integrate into the larger amended DTPP area consistent with General Plan goals related to integrating buildings into the surrounding environment.

A project is consistent with the General Plan if, considering all of its aspects, it will further the objectives and policies of the General Plan and will not obstruct their attainment. Perfect conformity with every policy set forth in the General Plan is not required; rather, it is sufficient that a project would be in substantial conformance with the objectives, policies, general land uses and programs specified in the General Plan. At the same time, the DTPP Plan-Wide Amendments propose certain amendments to the General Plan to ensure that it would not conflict with any General Plan policy that is fundamental, mandatory, and clear.

The DTPP Plan-Wide Amendments would introduce some development flexibility by permitting limited exceptions to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner setbacks, and other setbacks from the street, and lesser lot coverage than is currently required; and lowering the required minimum heights from 35 to 25 feet, or less with a potential exception. The exceptions would allow for an enhanced pedestrian experience, and provide support for ground floor retail, and no significant

land use impact related to General Plan consistency would arise. Additionally, rooftop structures that support active, recreational rooftop use(s), which are currently prohibited, would be permissible under the revised DTPP Development Standards. Finally, this SEIR also evaluates a potential future extension of the northern DTPP area boundary and programmatically evaluates the potential for additional office and residential development in the DTPP area.

In addition, the approval of the proposed General Plan and DTPP Plan-Wide amendments, would, on balance, achieve consistency with the General Plan (including the DTPP) because the amendments it would further the objectives, policies, general land uses, and programs of the General Plan. These include the General Plan's goal BE-11, which aims to create engaging retail, residential, and mixed-use destinations along corridors, and the General Plan's policy BE-18.6, which outlines the City's goal for transit-oriented development in areas surrounding the Caltrain station. In addition, the DTPP Plan-Wide Amendments would support the following policies related to pedestrian- and transit-oriented development to support non-automobile modes of transportation: BE-2.4, BE-11.3, BE-11.7, BE-11.11, BE-12, BE-12.1, BE-12.2, BE-16.1, BE-18.2, BE-18.5, and BE-18.6. For these reasons, the impact of the DTPP Plan-Wide Amendments related to the General Plan and DTPP would be the same as the DTPP Final EIR and would not result in new or more severe impacts than those identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

Zoning Code

The General Plan sets the broad parameters for growth in Redwood City and establishes future land use patterns. At the same time, the City uses zoning and precise plans to establish uses and development standards for properties. The DTPP is zoned P (Planned Community District) and regulates the use and development of properties within the amended DTPP area.

As noted previously, this SEIR evaluates a potential future extension of the northern DTPP area boundary; if ultimately approved, this extension would necessitate a Zoning Map revision. Additionally, amendment to the DTPP would include the DTPP Public Frontages and Use Regulations. Because the DTPP maps would be amended as described in Section 3.6.7 in Chapter 3, *Project Description*, the DTPP Plan-Wide Amendments would not conflict with the City's Zoning Code or other applicable development standards, and this impact would be the same as the DTPP Final EIR and would not result in new or more severe impacts than those identified in the Final EIR. Therefore, this impact would be *less than significant*.

Land Use and Planning Conclusion

If the Redwood City Council finds that amendments to the General Plan and DTPP are warranted to allow implementation of the DTPP Plan-Wide Amendments, the City would resolve any conflicts between the General Plan and DTPP through a contemporaneous legislative amendment of the General Plan and DTPP.

A conflict with a plan, policy, or regulation does not indicate a significant environmental land use impact under CEQA unless a project substantially conflicts with a land use plan or policy adopted to avoid or mitigate an environmental effect, such that the conflict would result in a substantial

adverse physical change in the environment related to land use. To the extent that such conflicts may result in substantial physical environmental impacts, this EIR discloses and analyzes these physical impacts in the relevant environmental topic sections. See, for example, Chapter 12, *Air Quality*; Chapter 11, *Noise and Vibration*; and Chapter 9, *Transportation and Circulation*.

Overall, the DTPP Plan-Wide Amendments and impacts related to conflicts with plans and policies would be the same as those identified in the DTPP Final EIR and would not result in new or more severe impacts. This impact would be *less than significant*.

Mitigation: None required.

4.4 References

Association of Bay Area Governments, *Plan Bay Area 2050*, Final, adopted October 21, 2021.

California Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook*, October 2011.

ESA Airports, 2015 (October). Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport. Prepared for the City/County Association of Governments of San Mateo County. Available at: https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf. Accessed February 3, 2022.

Federal Aviation Administration, Form FAA 7460-1, *Notice of Proposed Construction or Alteration*, Section 77.9, Construction or Alteration Requiring Notice, 2017. Available at https://www.faa.gov/documentLibrary/media/Form/FAA_Form_7460-1_042020.pdf. Accessed February 6, 2022.

Metropolitan Transportation Commission, Priority Development Areas, MTC Open Data Layer Library, September 20, 2021, Available: <https://arcg.is/0aKuL9>. Accessed February 5, 2022.

CHAPTER 5

Population and Housing

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on population and housing, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Population and housing impacts of the DTPP were analyzed on pp. 5-7 to 5-10 of the DTPP Final EIR. The DTPP Final EIR planned for up to 5,500 new residents and determined that impacts from the DTPP with respect to growth inducement and displacement of housing and people would be less than significant and no mitigation was required.

5.1 Environmental Setting

5.1.1 Existing DTPP Area Population, Housing, and Employment

The entire DTPP area comprises the City's most urban district. It contains a mix of commercial/retail, office, industrial, residential, and institutional uses, as well as parking. As of 2021, the DTPP area contained a total residential population of 4,243, living in 1,861 households,¹ and an estimated 10,295 jobs.

5.1.2 Existing and Projected Citywide and Regional Population, Housing, and Employment

Between 2010 and 2020, growth in Redwood City occurred at a faster rate than in San Mateo County as a whole. According to the U.S. Census Bureau Decennial Census, the population of Redwood City increased between 2010 and 2020 by 9.7 percent as compared with a 6.4 percent

¹ Note this number is for the total number of households, not total housing units, because projections for total housing units through 2040 are not provided in *Plan Bay Area 2040*. In general, the number of households is similar to the number of housing units. Note that *Plan Bay Area 2040* continues to serve as the basis for county transportation models, such as the model used in this analysis, because of the time needed to incorporate updated regional growth projections into sub-regional transportation models. It is therefore relied upon here for consistency.

increase in the population of San Mateo County.^{2,3} According to the California Department of Finance, the number of housing units in Redwood City increased between 2010 and 2020 by 8.1 percent, compared to a 3.6 percent increase in San Mateo County.⁴ Lastly, according to the Association of Bay Area Governments (ABAG), the number of jobs in Redwood City and San Mateo County has increased between 2010 and 2020 by 20 percent and 16 percent, respectively.⁵

ABAG makes projections about housing, job, and population growth for the purposes of regional transportation planning and compliance with state law on housing needs. ABAG’s *Plan Bay Area 2040* projects that the population of Redwood City and San Mateo County will continue to grow, averaging 1.2 percent and 0.8 percent each year between 2020 and 2040, respectively.⁶

In addition, ABAG forecasts that the number of households and jobs in Redwood City will continue to grow at a faster rate than in San Mateo County. ABAG forecasts that the number of households in Redwood City and San Mateo County will grow between 2020 and 2040 by 1.2 percent and 0.6 percent each year, respectively.⁷ Lastly, ABAG forecasts that the number of jobs in Redwood City and San Mateo County will grow between 2020 and 2040 by 1.1 percent and 0.9 percent, respectively.⁸

Table 5-1 summarizes population, housing, and job growth in Redwood City and San Mateo County.

² U.S. Census Bureau, 2010 Census. Available at https://data.census.gov/cedsci/table?q=population&t=Employment&g=0500000US06081_1600000US0660102&y=2010&tid=DECENNIALSF12010.P1. Accessed December 2, 2021.

³ U.S. Census Bureau, 2020 Census. Available at https://data.census.gov/cedsci/table?q=population&t=Populations%20and%20People&g=0500000US06081_1600000US0660102&y=2020&tid=DECENNIALPL2020.P1. Accessed December 2, 2021.

⁴ California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State—January 1, 2011–2021, Sacramento, CA. Available at www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/. Accessed December 3, 2021.

⁵ Association of Bay Area Governments, *Projections 2040*, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021.

⁶ *Ibid.* While ABAG and MTC in October 2021, jointly adopted an updated regional plan, *Plan Bay Area 2050*, growth projections arising from that most recent planning effort are not yet available at the level of detail that includes local jurisdictions such as Redwood City; that is, the available *Plan Bay Area 2050* projections are at the county and sub-county level (Redwood City is included in the “South San Mateo County” subregion, which includes communities for which anticipated growth is considerably different than is Redwood City’s. Moreover, regional transportation models, such as that used by the City/County Association of Governments of San Mateo County, are based on the growth projections from the *Plan Bay Area 2040*, and it routinely takes a year or more for these models to be updated to incorporate the most recent round of ABAG/MTC projections, once those projections are released at the census tract level of detail.

⁷ *Ibid.*

⁸ *Ibid.*

**TABLE 5-1
POPULATION, HOUSING, AND EMPLOYMENT GROWTH IN REDWOOD CITY AND SAN MATEO COUNTY
(2010–2040)**

Year	Redwood City			San Mateo County			
	Population	Housing	Jobs ^c	Population	Population Per Household	Housing	Jobs ^c
2010	76,815 ^a	29,167 ^b	59,290	718,451 ^a	2.65	271,031 ^b	343,335
2020	84,292 ^a	31,536 ^b	71,050	764,442 ^a	2.72	280,859 ^b	399,275
2030	90,995 ^c	33,740 ^d	73,015	853,260 ^c	2.82	302,520 ^d	423,005
2040	103,940 ^c	38,085 ^d	86,720	916,590 ^c	2.88	317,965 ^d	472,045

NOTES:

^a These data are sourced from the U.S. Census Bureau, 2010 and 2020 Census.

^b These data are sourced from the California Department of Finance

^c These data are sourced from the Association of Bay Area Governments (ABAG) *Plan Bay Area 2040*. As stated previously, *Plan Bay Area 2040* continues to serve as the basis for county transportation models, such as the model used in this analysis, because of the time needed to incorporate updated regional growth projections into sub-regional transportation models. It is relied upon here for consistency.

^d These data are sourced from the ABAG *Plan Bay Area 2040*. Note these figures refer to total households, not total housing units, because projections for total housing units through 2040 are not provided in Plan Bay Area 2040. In general, the number of households is similar to the number of housing units.

SOURCES:

Association of Bay Area Governments, *Projections 2040*, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021.

California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State—January 1, 2010–2021, Sacramento, CA, Accessed December 3, 2021. Available at www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/.

U.S. Census Bureau, 2000 and 2010 Census. Available at <https://data.census.gov/cedsci/>. Accessed December 2, 2021.

Jobs/Housing Balance

The term “jobs/housing balance” is used to describe the ratio of employed residents to the number of jobs in a city or region.^{9,10} This ratio is used as one indicator of the potential degree of in- and out-commuting. When there are substantially more employed residents than jobs in an area, more people must commute to another area, requiring longer commutes than if they worked locally (and vice versa). When the opposite is true, an area attracts in-commuters to fill the jobs that cannot be filled by local workers. A well-balanced ratio (close to one employed resident to one job) is typically desirable for environmental, economic, and quality-of-life reasons, although many other factors influence average commute distance. Travel models provide more detailed data about the extent of commuting in a region than are indicated by the ratio. Even a community with a 1:1 balance may have many local workers traveling to jobs outside the community, and many non-locals in-commuting to fill jobs in that community, because there can be no guarantee that the employed residents in such a “balanced” community will all work at jobs in the same community.

Redwood City has historically had substantially more local jobs than employed residents. As shown in **Table 5-2**, the number of employed residents and local jobs in Redwood City grew between 2010

⁹ This is calculated by dividing the number of jobs by employed residents. A jobs-to-employed-residents ratio is used instead of a jobs-to-housing-units ratio because there can be more than one employed resident per housing unit. The ratio of jobs to employed residents is more accurate for assessing the overall amount of in- and out-commuting.

¹⁰ Employed residents are residents of Redwood City who have jobs, although those jobs may be outside the city, requiring commutes of varying distances.

and 2020 from 36,898 and 59,290, respectively, to 45,400 and 71,050, respectively.^{11,12,13} As shown in Table 5-2, the current ratio of jobs to employed residents in Redwood City is 1.6. According to U.S. Census data (American Community Survey, 5-Year Estimates for 2020), approximately two-thirds of employed Redwood City residents work in San Mateo County. This is a greater share than for all employed San Mateo County residents, of whom about 60 percent work in San Mateo County, and also higher than the Bay Area average: about 57 percent of Bay Area workers live and work in the same county.

**TABLE 5-2
JOBS AND HOUSING BALANCE IN REDWOOD CITY AND SAN MATEO COUNTY (2010 AND 2020)^a**

Year	Employed Residents		Jobs		Jobs-to-Employed-Residents Ratio ^b	
	Redwood City	San Mateo County	Redwood City	San Mateo County	Redwood City	San Mateo County
2010	36,896	335,340	59,290	337,785	1.6	1.0
2020	45,400 ^c	404,100 ^c	71,050	399,275	1.6	.99

NOTES:

^a All data in this table are sourced from the Association of Bay Area Governments (ABAG) *Plan Bay Area 2040* unless otherwise specified.

^b The jobs/housing balance is calculated by dividing the number of jobs by employed residents.

^c These data are sourced from the California Employment Development Department.

SOURCES:

Association of Bay Area Governments, *Projections 2040*, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021.

U.S. Census Bureau, American Community Survey 1-Year Estimates (2010). Available at https://data.census.gov/cedsci/table?q=employed%20residents&g=0500000US06081_1600000US0660102&tid=ACSDP1Y2010.DP03. Accessed December 8, 2021.

California Employment Development Department, Labor Force and Unemployment Rate for Cities and Census Designated Places, 2020. Available at <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed December 8, 2021.

To provide context, many cities in Silicon Valley and throughout the Bay Area have more jobs than employed residents, including other nearby cities in San Mateo County and Santa Clara County such as Burlingame (2.18 jobs per employed resident), San Mateo (1.09 jobs per employed resident), Santa Clara (2.14 jobs per employed resident), Sunnyvale (1.19 jobs per employed resident), and Mountain View (1.08 jobs per employed resident).¹⁴ However, according to ABAG, San José, the largest city in Santa Clara County, as well as nearby cities in San Mateo County such as Atherton, San Carlos, Woodside, and Belmont, have more employed residents than jobs. When considering the larger geographical context, San Mateo County as a whole has a relatively balanced jobs and housing ratio (0.99 jobs per employed resident).

¹¹ U.S. Census Bureau, American Community Survey 1-Year Estimates (2010). Available at https://data.census.gov/cedsci/table?q=employed%20residents&g=0500000US06081_1600000US0660102&tid=ACSDP1Y2010.DP03. Accessed December 8, 2021.

¹² California Employment Development Department, Labor Force and Unemployment Rate for Cities and Census Designated Places, 2020. Available at <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed December 8, 2021.

¹³ Association of Bay Area Governments, *Projections 2040*, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021.

¹⁴ Association of Bay Area Governments, *Projections 2040*, 2018 (last updated in 2019). Available at <https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra>. Accessed May 7, 2020.

It is noted that jobs/housing balance is not explicitly identified as a topic in the CEQA Checklist recommended by the Governor’s Office of Planning and Research and relied upon, in substantial part, by the City. This is because economic or social effects of a project are not physical effects on the environment that are properly within the purview of CEQA. However, in accordance with Section 15131 of the state CEQA Guidelines, an EIR may consider whether a project’s anticipated economic or social changes may result in adverse physical changes.

5.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR. Section 5.2 of the DTPP Final EIR Chapter 5, *Population and Housing*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

5.2.1 Regional Housing Needs Allocation 2023-2031

The regional housing needs allocation process is mandated by state housing law and is a precursor to the periodic process of updating local housing elements of general plans. The State of California determines what the region’s total housing need will be for the planning period, and ABAG distributes that need among local jurisdictions in the Bay Area, initiating each jurisdiction’s housing element update.

Table 5-3 shows the 2023–2031 Regional Housing Needs Allocation (RHNA) by income level for the City. Based on its allocation, the City is required to identify sites sufficient to accommodate a total of 4,588 new housing units at the specified levels of affordability. Given “no net loss” provisions in State law, local jurisdictions are advised to include a buffer of units in addition to their RHNA, and the City is currently planning for an aspirational goal of approximately 6,882 units, or 150 percent of its RHNA.¹⁵

**TABLE 5-3
FINAL REGIONAL HOUSING NEEDS ALLOCATION, 2023–2031**

Income Level	Redwood City	Bay Area
Very Low (0–50% AMI)	1,115	114,442
Low (51–80% AMI)	643	65,892
Moderate (81–120% AMI)	789	72,712
Above Moderate (+120% AMI)	2,041	188,130
Total Housing Units	4,588	441,176

NOTE: AMI = area median income

SOURCE: Association of Bay Area Governments, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area: 2023–2031*. Available at: https://abag.ca.gov/sites/default/files/documents/2021-11/proposed%20Final_RHNA_Allocation_Report_2023-2031.pdf. Accessed December 7, 2021.

¹⁵ Association of Bay Area Governments, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area: 2023–2031*. Available at: https://abag.ca.gov/sites/default/files/documents/2021-11/proposed%20Final_RHNA_Allocation_Report_2023-2031.pdf. Accessed December 7, 2021.

5.2.2 City of Redwood City General Plan

The City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. Goals and policies relevant to population, housing, and the jobs and housing balance include the following:

- *Policy BE-2.4:* Provide opportunities for housing development at a range of densities and housing types that provide various choices for current and future residents.
- *Policy BE-11.3:* Plan for and accommodate mixed-use projects along corridors, where a site or sites are developed in an integrated, compatible, and comprehensively planned manner involving two or more land uses. Combine residential and office uses with commercial development to reduce automobile trips and encourage walking, and facilitate compact, sustainable development.
- *Program BE-20: Jobs:Housing Balance.* Develop a system to periodically review total new commercial development square footage and new residential dwelling units. Track changes to the city's jobs:housing balance, and adjust the Zoning Ordinance as appropriate to ensure adequate housing is developed to provide housing choice options for local businesses' employees.
- *Policy BE-20.7:* Encourage high-quality residential development in mixed-use areas within Gateway Centers.
- *Policy BE-23.7:* Promote higher residential densities at locations near or within commercial, financial, and compatible employment centers, and also transportation corridors where neighborhood services are available.
- *Policy BE-33.1:* Encourage and facilitate the development of new commercial office space Downtown to provide opportunities to recruit large and mid-sized businesses and to retain expanding firms.
- *Policy BE-33.3:* Pursue mixed-use housing and commercial development Downtown with a range of affordability options.
- *Policy BE-34.6:* Promote a mix of housing types at a range of affordability options.
- *Policy BE-34.7:* Strive to increase the number of Redwood City residents who work in Redwood City; people who work in Redwood City should be able to find housing options in Redwood City.

The General Plan anticipates an increase of 28,002 jobs by 2030 in the Redwood City Planning Area, which includes the city limits and the Redwood City Sphere of Influence.^{16,17}

¹⁶ The City of Redwood City, *Final Environmental Impact Report for the Redwood City Downtown Precise Plan*, State Clearinghouse No. 2006052027, certified January 2011, p. 17-5 of the Draft EIR.

¹⁷ A Sphere of Influence is designated by a county Local Agency Formation Commission and indicates an area adjacent to but outside a city's boundary and that represent the probable, future physical boundary or service area of the city. Redwood City's sphere of influence includes the Emerald Hills, Selby, and North Fair Oaks neighborhoods, as well as portions of the Canyon neighborhood west of Alameda de las Pulgas that are outside the city limits. Redwood City has no regulatory jurisdiction over lands in the sphere of influence lands, which are governed by San Mateo County. However, the City provides certain services (water, sewer) to parts of the sphere of influence and lands in the sphere of influence may have Redwood City postal addresses. Planning decisions made by the City may, therefore, have some bearing on development in these unincorporated adjacent areas.

5.2.3 City of Redwood City 2015–2023 Housing Element

The City of Redwood City 2015-2023 Housing Element (Housing Element), adopted in 2014,¹⁸ identifies the existing and projected need for housing in the community in terms of affordability, availability, adequacy, and accessibility. The Housing Element is intended to regulate available housing supply through planning and zoning. Relevant policies from the Housing Element include the following:

- *Policy H-3.1:* Ensure adequate housing sites through appropriate land use, zoning, and precise plan designations to accommodate the city’s share of regional housing needs.
- *Policy H-3.2:* Facilitate a variety of housing choices, offering diversity in types, ownership, and sizes, including options for mixed-use housing, transit-oriented developments, and live-work housing.
- *Policy H-3.5:* Promote the development of higher-density housing proximate to jobs, shopping, services, schools, transportation, and recreation opportunities.
- *Policy H-3.6:* Provide zoning provisions that further facilitate the development of second units, while considering and retaining neighborhood character.

The 2014 Housing Element anticipates construction of 9,103 new housing units by 2030.¹⁹ The Housing Element identifies the existing DTPP area as being able to accommodate 2,500 new housing units through January 31, 2023, consistent with the Maximum Allowable Development of residential units in the existing DTPP.^{20,21}

As stated above, the City received its final RHNA for the period 2023–2031 in mid-2021. Issuance of the final RHNA necessitates local governments to update their housing elements and zoning to show how they plan to accommodate their RHNA units. The City in April 2022 transmitted a draft of the proposed 2023–2031 Housing Element to the state Housing and Community Development Department (HCD) for review and comment. HCD provided comments in July 2022, and the City transmitted a revised draft Housing Element to HCD in October 2022, with plans to adopt a new Housing Element in early 2023.²² The October HCD Review Draft–v2 identified the aspirational potential for the addition of up to 7,003 new housing units in Redwood City by 2031, of which about 5,075 units would be above and beyond the 1,930 new units anticipated under the DTPP Plan-Wide Amendments and the proposed Transit District sub-area within the DTPP. The draft Housing Element total includes more than 1,400 approved but unbuilt units as of July 1, 2022.

¹⁸ Redwood City, *2015-2023 Housing Element, City of Redwood City*, October 20, 2014. Available at <https://www.redwoodcity.org/home/showpublisheddocument/5127/635782757008700000>. Accessed December 7, 2021.

¹⁹ Ibid.

²⁰ Ibid., p. H-76

²¹ As explained in Chapter 3, *Project Description*, the cap on residential development in the DTPP area is proposed to be eliminated, consistent with state housing law.

²² Redwood City, *Welcome Home, Redwood City: The Redwood City Housing Element; HCD Review Draft–v2*, October 2022. Available at https://redwoodcitypro.wpengine.com/wp-content/uploads/2022/10/00_RWC_HCD_Submittal_HousingElement.pdf.

5.3 Impacts and Mitigation Measures

5.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe population and housing impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

5.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- a) induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- b) displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Since certification of the DTPP Final EIR, criterion “a” in Appendix G the CEQA Guidelines has been modified to clarify that significant population growth impacts would only occur if substantial population growth were *unplanned*. While the DTPP Final EIR analyzed whether population growth pursuant to the plan would be within planning projections for the City, or *planned* growth, this requirement was not explicitly stated in the CEQA Guidelines significance criteria at the time.

5.3.3 Impacts and Mitigation Measures

Overall impacts from the DTPP Plan-Wide Amendments on population and housing would be reduced compared to those analyzed in the DTPP Final EIR. While the DTPP was found to not exceed regional growth projections, the DTPP Final EIR stated the DTPP could result in the demolition of 84 housing units and the associated displacement of 84 to 185 persons. The proposed DTPP Plan-Wide Amendments would not result in any direct displacement; thus, the impacts related to population and housing would be reduced compared to the DTPP Final EIR.

Impact PH-1: Implementation of the DTPP Plan-Wide Amendments would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (*Less than Significant*)

Population and housing impacts of the proposed DTPP are analyzed on pp. 5-7 to 5-10 of the DTPP Final EIR. The DTPP Final EIR determined that implementation of the DTPP would result in 2,500 additional housing units, 401,000 square feet of net new non-residential development, and 5,500

new residents. The DTPP Final EIR determined this growth would not exceed growth projections for the City, and impacts related to growth inducement would be less than significant.²³

Direct Population Growth

As described in Chapter 3, *Project Description*, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP. Specifically, this SEIR assumes that the DTPP Plan-Wide Amendments would indirectly allow for 830 net new residential units and 1,167,100 net new square feet of office space. As shown in **Table 5-4**, The City estimates that the DTPP Plan-Wide Amendments would result in approximately 1,894 new residents, and approximately 5,070 new employees from the increase in office space.²⁴ The 1,894 residents and 5,070 employees would represent approximately 10 percent of the residential growth and approximately 32 percent of the job growth ABAG anticipates will occur in Redwood City from 2020 to 2040.

**TABLE 5-4
EXISTING AND PROPOSED REDWOOD CITY AND DTPP PLAN-WIDE AMENDMENTS
POPULATION, HOUSING, AND EMPLOYMENT GROWTH**

	Population	Housing	Jobs
Existing	84,292 ^a	31,536 ^b	71,050 ^c
Net New Growth Planned between 2010-2030 (General Plan) ^d	16,819	9,103	28,002
Net New Growth Planned between 2020-2040 (ABAG) ^e	19,648	6,549	15,670
Proposed DTPP Plan-Wide Amendments	1,894 ¹	830	5,070 ^e

NOTES:

¹ This number is derived by multiplying the number of proposed units (830) by 2.2818, which is the number of persons per household in Redwood City used in the transportation analysis for the proposed DTPP Plan-Wide Amendments.

SOURCES:

- ^a U.S. Census Bureau, 2010 Census. Available at <https://data.census.gov/cedsci/>. Accessed December 2, 2021.
- ^b California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State—January 1, 2010–2021.
- ^c Association of Bay Area Governments, *Projections 2040*, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021. As stated previously, *Play Bay Area 2040* continues to serve as the basis for county transportation models, such as the model used in this analysis, because of the time needed to incorporate updated regional growth projections into sub-regional transportation models. It is relied upon here for consistency.
- ^d *The City of Redwood City, Final Environmental Impact Report for the Redwood City Downtown Precise Plan, State Clearinghouse No. 2006052027, certified January 2011, p. 17-5 of the Draft EIR.*
- ^e Fehr & Peers, Redwood City DTPP Plan-Wide Amendments – Transportation Analysis, November 2022. This document is provided in Appendix C of this SEIR.

²³ The City of Redwood City, *Final Environmental Impact Report for the Redwood City Downtown Precise Plan*, State Clearinghouse No. 2006052027, certified January 2011, pp. 5-7 to 5-8 of the Draft EIR.

²⁴ Fehr & Peers, 2022. Total Project Site Population, Housing, and Employment Spreadsheet. These numbers were derived based on the population and employment generation rates consistent with those from the Transportation Analysis Zones (TAZs) in the amended DTPP area within the C/CAG-VTA Travel Demand Model. The C/CAG-VTA Travel Demand Model rates are developed based on several socio-economic data sources and projections from MTC and ABAG. Specifically, generation rates of 2.28 persons per household (830 housing units * 2.2818 = 1,894 residents) and one employee per approximately 231 square feet of office space (1,671,100 square feet of office/230.226 = 5,070 employees) were used in the analysis.

The proposed increase in residential units, residents, and jobs would not be considered a substantial adverse impact in and of itself because the amended DTPP area is:²⁵

- Located around a major transit hub (Redwood City Caltrain Station) and near highways (U.S. Route 101, Interstate 280, and State Route 84), and served by existing transportation infrastructure such as streets, commuter rail, and local and express bus service);
- A major employment center; and
- Would include infill development in an area served by existing and planned utilities infrastructure.

These locational characteristics make the DTPP area a desirable location for planned growth from an environmental perspective. The physical effects of the proposed development are analyzed in detail elsewhere in this SEIR.

The project would also conform with *Plan Bay Area 2050*, as the project site is within the “Redwood City Downtown” Priority Development Area (PDA). This means the DTPP is located within an existing community, within one-half mile of frequent transit, and in an area planned for future housing and job growth by the City and the regional agencies. This area is intended to accommodate a substantial proportion of future growth in Redwood City and is the City’s primary location for advancing regional environmental goals. For example, focusing job growth within walking distance of the City’s most significant transit hub would best support non-car commuting, compared to job growth in other parts of the region.

Although this SEIR assumes the potential for additional office and residential development in the amended DTPP area, this growth would be consistent with City and regional plans for growth and would not represent substantial unplanned growth. Furthermore, the proposed project would help the City meet its regional housing needs goal and would advance the City’s long-term vision for the amended DTPP area as a priority area for accommodating planned growth.

CEQA requires that the effects of a project be analyzed in isolation (i.e., project-specific impacts) so that decision-makers can consider those impacts. Therefore, the Draft SEIR appropriately compares assumed growth from the proposed DTPP Plan-Wide Amendments to planned growth in Redwood City in this Chapter 5, *Population and Housing*. However, CEQA also requires analysis of cumulative effects, meaning the incremental impact of the project when added to the impacts of other closely related past, present, or reasonably foreseeable future projects; this analysis is found in Chapter 17, *Cumulative Impacts*. As stated in Chapter 17, planned growth that is included in the regional projections promulgated by the Association of Bay Area Governments includes more than enough housing and jobs to accommodate not only the planned DTPP Plan-Wide Amendments, but also the proposed Transit District, which is the subject of a separate SEIR, as well as other known cumulative projects in Redwood City.

²⁵ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

As noted above, the current General Plan Housing Element anticipates construction of 9,103 new housing units and the General Plan anticipates up to 28,002 new jobs by 2030, not including the DTPP. Between 2010 and 2021, 2,037 housing units were developed in Downtown, and 463 housing units were remaining in the development cap under the DTPP.²⁶ This SEIR assumes that the DTPP Plan-Wide Amendments would indirectly allow for the development of up to 830 net new residential units and 1,167,100 square feet office space, resulting in approximately 5,070 new jobs, as indicated above. However, the residential and job growth envisioned for the proposed DTPP Plan-Wide Amendments would not exceed planned growth anticipated to occur by 2040 in Redwood City under ABAG’s projections or under the General Plan. Moreover, the DTPP Plan-Wide Amendments are by definition an amendment of the DTPP and the General Plan to allow for more jobs and housing growth in Downtown; therefore, direct population growth associated with the proposed DTPP Plan-Wide Amendments would represent planned growth, and this impact would be *less than significant*.

Induced Unplanned Population Growth

Indirect or secondary unplanned growth generally refers to the population associated with development that could occur when infrastructure is expanded to previously unserved or underserved areas. The term can also refer to unplanned growth resulting from unmet housing demand associated with new job growth, which may include new job growth induced by the project, often thought of in terms of an economic multiplier of new jobs or housing in an area.²⁷ Secondary growth associated with utility/infrastructure investments typically occurs in suburban and rural areas adjacent to or near undeveloped lands and is not applicable to the amended DTPP area, which is in a built-up urban environment that is already largely served by existing infrastructure and any necessary infrastructure improvements would be sized to serve proposed development within the amended DTPP area, and not to make adjacent areas available for additional development. The discussion below thus considers whether the proposed DTPP Plan-Wide Amendments would result in induced unplanned growth as a result of unmet housing demand.

This SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP, together totaling 1,167,100 net new square feet of office space and 830 new residential units. This growth in office space would result in approximately 5,070 new employees by 2040, which would result in a demand for approximately 3,380 residential units, based on 1.5 employed residents per unit (the current ratio for San Mateo County). This total is conservatively high in that assumes that all jobs in the DTPP area would be new to Redwood City and the region and that no existing workers would relocate from other jobs. Some of these employees would be able to reside in the 830 residential units that could be constructed pursuant to the DTPP Plan-Wide

²⁶ McGill, Anna, Principal Planner, City of Redwood City, email communication, February 10, 2022.

²⁷ This refers to the potential for a project to cause increased activity in the local or regional economy. Economic effects can include such effects as the multiplier effect. A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The multiplier effect recognizes that the on-site employment and population growth of each project may not be the complete picture of growth caused by the project.

Amendments; these units could accommodate nearly 1,250 employees, using the ratio set forth above.

The new housing demand that is not met on-site would likely be met in other parts of the city and the region, particularly given the amended DTPP area's transit accessibility, which would allow new employees to access transit-served areas throughout the region. As stated above, the amended DTPP area's locational characteristics make the amended DTPP area a desirable location for planned growth from an environmental perspective, primarily because of its proximity to transit and urban services. The physical effects of the proposed development are analyzed in detail elsewhere in this SEIR.

As described under "Direct Population Growth" above, the DTPP Plan-Wide Amendments conform with *Plan Bay Area 2050*, as the project site is within the "Redwood City Downtown" PDA. As such, this area is intended to accommodate a substantial proportion of future growth in Redwood City and is the City's primary location for advancing regional environmental goals. In addition, local governments throughout the region are planning for additional residential and employment-generating land uses, some of which could meet the demands created indirectly by the proposed DTPP Plan-Wide Amendments. In particular, as stated above under "Regional Housing Needs Allocation 2023-2031," Redwood City plans to accommodate 150 percent of its RHNA, or at least 6,882 net new residential units by 2031.²⁸ This growth in housing supply citywide would accommodate the demand for housing created by the employment growth associated with the proposed DTPP Plan-Wide Amendments. As described above, the proposed DTPP Plan-Wide Amendments would be consistent with *Plan Bay Area 2040*, the planning principals in *Plan Bay Area 2050*,²⁹ and the associated local growth projections and visions to concentrate new growth around transit. For these reasons, the impact of induced population growth associated with the DTPP Plan-Wide Amendments would be ***less than significant***.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the proposed DTPP Plan-Wide Amendments would not have any impacts on population growth because they would include closures to existing streets and would not create any new developable area. In addition, the street closures would not include new residential units or businesses, and thus would not result in direct or indirect population, housing, or employment growth.

²⁸ As noted above in the Regulatory Setting, the draft Housing Element has identified the aspirational potential for up to 7,003 new result housing units in Redwood City by 2031, of which about 5,075 units would be above and beyond the 1,930 new units anticipated under the DTPP Plan-Wide Amendments and the proposed Transit District sub-area within the DTPP.

²⁹ While ABAG and MTC in October 2021, jointly adopted an updated regional plan, *Plan Bay Area 2050*, growth projections arising from that most recent planning effort are not yet available at the level of detail that includes local jurisdictions such as Redwood City; that is, the available *Plan Bay Area 2050* projections are at the county and sub-county level (Redwood City is included in the "South San Mateo County" subregion, which includes communities for which anticipated growth is considerably different than is Redwood City's. Moreover, regional transportation models, such as that used by the City/County Association of Governments of San Mateo County, are based on the growth projections from the *Plan Bay Area 2040*, and it routinely takes a year or more for these models to be updated to incorporate the most recent round of ABAG/MTC projections, once those projections are released at the census tract level of detail.

Overall, while the proposed DTPP Plan-Wide Amendments would indirectly result in additional growth (direct and indirect), the growth would be consistent with regional plans and for this reason population and housing impacts from the proposed DTPP Plan-Wide Amendments would be less than significant, just as in the DTPP Final EIR.

Impact PH-2: Implementation of the DTPP Plan-Wide amendments would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (*Less than Significant*)

Direct Displacement

The proposed DTPP Plan-Wide Amendments would not directly displace any dwelling units. Moreover, the proposed amendments would not substantially increase development potential within the DTPP area, particularly in light of the fact that, the only addition to the existing development caps would be to increase the office cap by 80,000 square feet, specifically reserved for small office projects (20,000 net new square feet or less). All other increases in the office development cap and the permitted number of residential units would be considered subsequently by the City, as part of project-specific reviews, as explained in Chapter 3, *Project Description*. Therefore, the proposed DTPP Plan-Wide Amendments would not directly increase development potential on sites in the DTPP area and, as a result, sites that contain existing dwelling units would not be placed under development pressure such that these sites would be expected to undergo a loss of existing residential units. Thus, the DTPP Plan-Wide Amendments would not cause direct displacement of any residential population. The six Gatekeeper Project sites—the most likely sites to undergo development in the near term—do not contain residential units and instead are occupied by one- and two-story office/retail buildings that would likely be removed to accommodate new development at higher densities/intensities. While some existing employees could be displaced, the overall amount of new employment in the DTPP area would increase substantially. For these reasons, the DTPP Plan-Wide Amendments would not directly displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing elsewhere. This impact would be *less than significant*.

Indirect Displacement

This SEIR assumes that development pursuant to the proposed DTPP Plan-Wide Amendments would indirectly result in 5,070 new employees by 2040, which may alter the city's jobs/housing balance in 2040. A jobs/housing imbalance could indirectly cause involuntary displacement of housing and residents resulting from increased housing costs in Redwood City. This could occur, for example, if increased employment, particularly of high-salary positions, were to attract a substantial number of new residents to the DTPP area or to Redwood City generally, increasing competition for available housing stock. It is noted that jobs-housing balance is generally most effectively addressed at a regional or sub-regional level, rather than on the basis of a specific project's ratio of jobs to employed residents or even at the level of a single community, because it is likely to be infeasible for every city to demonstrate self-contained jobs-housing equivalency, given the very large number of factors that influence where people live and work. In this case,

while the DTPP Plan-Wide Amendments represent a plan for Downtown Redwood City and not an individual development project, it must be recognized that the DTPP area, at 183 acres, encompasses only 1.5 percent of Redwood City's land area. Accordingly, while the assumed development to be added under the proposed DTPP Plan-Wide Amendments would have a greater ratio of jobs to employed residents than does Redwood City as a whole (approximately 4.1 for the DTPP area, compared to 1.6 for the City as a whole), this reflects the fact that the downtown area that has historically housed many of Redwood City's jobs. In contrast, there are large areas of the City and region that are exclusively residential. The proposed DTPP Plan-Wide Amendments would also add some 830 new housing units to downtown.

In general, however, CEQA does not require an analysis of socioeconomic issues such as gentrification, cost of living, or effects on "community character." The CEQA Guidelines state, however, that while the economic or social effects of a project are not appropriately treated as significant effects on the environment, it is proper for an EIR to examine potential links from a project to physical effects as a result of anticipated economic or social changes.

For the purposes of this EIR, *indirect displacement* is defined as the process that occurs "when any household is forced to move from its residence by conditions that affect the dwelling or immediate surroundings, and which:

1. Are beyond the household's reasonable ability to control or prevent;
2. Occur despite the household's having met all previously imposed conditions of occupancy; and
3. Make continued occupancy by that household impossible, hazardous or unaffordable."³⁰

Indirect displacement of residents is occurring throughout the Bay Area as a result of regional housing and economic trends, and could result from additional development and infrastructure investments. However, predicting the extent to which displacement may occur as a result of planned growth is extremely difficult. Also, according to the University of California, Berkeley Displacement Project, there is currently no credible methodology for attributing displacement to specific projects.³¹ It would be speculative to determine with any specificity the amount of a housing price increase or indirect displacement that could be attributed to any single project aligned with planned growth, particularly as the region as a whole experiences a strengthening economy region-wide and increasing housing demand resulting from the inability of regional housing supply to keep pace with demand.

It is more appropriate to plan for new jobs and housing and address potential displacement at the citywide and regional levels, which enable consideration of induced housing demand and regional

³⁰ Zuk, M., A. H. Bierbaum, K. Chapple, K. Gorska, and A. Loukaitou-Sideris. Gentrification, Displacement, and the Role of Public Investment. *Journal of Planning Literature*, 33(I), 2018. Available at <https://journals.sagepub.com/doi/abs/10.1177/0885412217716439>.

³¹ Chapple, K., and M. Zuk, Miriam. Forewarned: The Use of Neighborhood Early Warning Systems for Gentrification and Displacement. *Cityscape: A Journal of Policy Development and Research* 18(3), 2016. Available at <https://www.huduser.gov/portal/periodicals/cityscpe/vol18num3/ch5.pdf>.

economic trends. As described above, the proposed DTPP Plan-Wide Amendments would be consistent with planned growth under *Plan Bay Area 2050 and the General Plan*.

From a CEQA perspective, the relevant inquiry is whether there are reasonably foreseeable secondary, physical effects of indirect displacement, such as additional VMT, greenhouse gas (GHG) emissions, and air pollutant emissions as displaced residents are forced to locate replacement housing elsewhere and have longer commutes. However, as discussed above, attributing a certain amount of indirect displacement to a specific project, and then attributing secondary impacts of increased VMT, GHG, and air pollutant emissions, would be speculative and thus is beyond the requirements of CEQA. The impacts of the DTPP Plan-Wide Amendments on these resource areas are analyzed in Chapter 12, *Air Quality*; Chapter 13, *Climate Change*; and Chapter 9, *Transportation*.

Also, as stated above, the proposed DTPP Plan-Wide Amendments would be developed in a way that is consistent with City expectations and desires for growth and new development. It would provide a mix of housing and employment, and is intended to take full advantage of the high level of transit connectivity that the DTPP affords, responding to plans like *Plan Bay Area 2050* and the General Plan, which call for transit-oriented development. Secondary environmental effects associated with cumulative citywide and regional growth are addressed in Impact C-PH-1 in Chapter 17, *Cumulative Impacts*. For these reasons, the environmental impacts of indirect displacement are speculative and not discussed further.

For these reasons, the impact related to potential indirect displacement would be *less than significant*, just as in the DTPP Final EIR.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the proposed DTPP Plan-Wide Amendments would not have any impacts on displacement of people or housing because they would consist of street closures and modifications that would not increase or decrease developable areas of downtown.

Overall, while the DTPP Plan-Wide Amendments would result in redevelopment of sites currently occupied by small retail/office buildings, they would not directly or indirectly displace substantial numbers of people or housing, resulting in a less than significant impact, the same as the DTPP Final EIR.

Mitigation: None required.

5.4 References

- Association of Bay Area Governments, Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area: 2023–2031. Available at: https://abag.ca.gov/sites/default/files/documents/2021-11/proposed%20Final_RHNA_Allocation_Report_2023-2031.pdf. Accessed December 7, 2021.
- Association of Bay Area Governments, Projections 2040, 2017. Available at projections.planbayarea.org/. Accessed December 2, 2021.
- The City of Redwood City, Draft Environmental Impact Report for the Redwood City Downtown Precise Plan, State Clearinghouse No. 2006052027, August 2010, pp. 5-7 to 5-10.
- California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State—January 1, 2011–2021, Sacramento, CA. Available at www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/. Accessed December 3, 2021.
- California Employment Development Department, Labor Force and Unemployment Rate for Cities and Census Designated Places, 2020. Available at <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed December 8, 2021.
- Chapple, K., and M. Zuk, Miriam. Forewarned: The Use of Neighborhood Early Warning Systems for Gentrification and Displacement. *Cityscape: A Journal of Policy Development and Research* 18(3), 2016. Available at <https://www.huduser.gov/portal/periodicals/cityscpe/vol18num3/ch5.pdf>.
- Economic & Planning Systems, Inc. Redwood City Fiscal Analysis of Land Uses, August 2021. Available at [https://webapps.redwoodcity.org/files/cd/main/EPS201062_RedwoodCityLandUseFiscal_8.17.21-\(final\)-1.pdf](https://webapps.redwoodcity.org/files/cd/main/EPS201062_RedwoodCityLandUseFiscal_8.17.21-(final)-1.pdf). Accessed December 8, 2021.
- Fehr & Peers, 2022. Transportation Analysis Supporting Information.
- U.S. Census Bureau, 2010 Census. Available at https://data.census.gov/cedsci/table?q=population&t=Employment&g=0500000US06081_1600000US0660102&y=2010&tid=DECENNIALSF12010.P1. Accessed December 2, 2021.
- U.S. Census Bureau, American Community Survey 1-Year Estimates (2010). Available at https://data.census.gov/cedsci/table?q=employed%20residents&g=0500000US06081_1600000US0660102&tid=ACSDP1Y2010.DP03. Accessed December 8, 2021.
- U.S. Census Bureau, 2020 Census. Available at https://data.census.gov/cedsci/table?q=population&t=Populations%20and%20People&g=0500000US06081_1600000US0660102&y=2020&tid=DECENNIALPL2020.P1. Accessed December 2, 2021.
- Redwood City, Draft Environmental Impact Report for the Redwood City Downtown Precise Plan, State Clearinghouse No. 2006052027, August 2010, pp. 5-7 to 5-8.
- Redwood City, 2015-2023 Housing Element, City of Redwood City, October 20, 2014. Available at <https://www.redwoodcity.org/home/showpublisheddocument/5127/635782757008700000>. Accessed December 7, 2021.

Redwood City, Welcome Home, Redwood City: The Redwood City Housing Element, HCD Review Draft–v2, October 2022. Available at https://redwoodcitypro.wpengine.com/wp-content/uploads/2022/10/00_RWC_HCD_Submittal_HousingElement.pdf.

Zuk, M., A. H. Bierbaum, K. Chapple, K. Gorska, and A. Loukaitou-Sideris. Gentrification, Displacement, and the Role of Public Investment. *Journal of Planning Literature*, 33(I), 2018. Available at <https://journals.sagepub.com/doi/abs/10.1177/0885412217716439>.

This page intentionally left blank

CHAPTER 6

Aesthetics and Shadows

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on aesthetics and shadows, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

The DTPP Final EIR found impacts on scenic vistas, scenic resources, visual character or quality, light and glare, and shadow to be less than significant. No mitigation measures were necessary.

6.1 Environmental Setting

6.1.1 Visual Resources

Visual resources typically involve prominent, unique, and identifiable natural features in the environment (e.g., trees, rock outcroppings, islands, ridgelines, and aesthetically appealing open spaces) and cultural features or resources (e.g., regional or architecturally distinctive buildings or structures that serve as focal points of interest). Visual resources in the immediate vicinity of the amended DTPP area include the City’s western hills, Redwood Shores lagoons, city and regional parks such as Edgewood Park and Natural Preserve, and the San Francisco Bay.¹

6.1.2 Scenic Vistas

Scenic vistas may be generally described as panoramic views of a large geographic area for which the field of view can be wide and extend into the distance. Under CEQA, scenic vistas are those that are experienced from publicly accessible locations and include urban skylines, valleys, mountain ranges, or large bodies of water. Publicly accessible viewpoints are commonly city streets, bridges, freeways, parks, and other public spaces.

Views from the vicinity of the proposed amended DTPP area are limited due to the flat terrain in and around Downtown Redwood City. However, views of portions of the western hills are available from vantage points within and around the Downtown. In addition, scenic views of

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

Downtown Redwood City and the San Francisco Bay are available from four vantage points in the western hills: Easter Cross, Easter Bowl, Cañada College, and Edgewood County Park.

6.1.3 Visual Character of the DTPP

“Visual character” is an impartial description of the defining physical features, landscape patterns, and distinctive physical qualities within a landscape. Visual character is informed by the composition of land, vegetation, water, and structures and their relationship to one another and their relative predominance, and by prominent elements of form, line, color, and texture that combine to define the composition of views. Visual character—defining resources and features within a landscape—may derive from notable landforms, vegetation, land uses, building design and façade treatments, transportation facilities, overhead utility structures and lighting, historic structures or districts, or panoramic open space.

Public Realm Character

The DTPP is located in an urban and built-out area of Redwood City. The underlying street grid in Downtown is different from the surrounding neighborhoods. In general, neighborhood streets southwest of El Camino Real intersect the amended DTPP area and run in a southwest-northeast direction, while the neighborhood streets north of Brewster Avenue and south of Maple Street intersect the amended DTPP area and run in a northwest-southeast direction. The varying angles of streets intersecting within the amended DTPP area results in irregular block shapes and roadway patterns. In general, the development pattern in this area is less uniform than that found to the north across Brewster Avenue, or in residential neighborhoods south of Maple Street.

Downtown contains Redwood City’s most pedestrian-oriented areas. Many streets in this area include the following pedestrian amenities: flat terrain; short blocks; wide sidewalks; street trees; pedestrian-scale lighting; on-street parking; crosswalks on most intersections; and low-speed traffic.

Existing Building Heights

Buildings in the amended DTPP area range from one to 10 stories in height; however, most buildings in the amended DTPP area are under three stories. In the heart of Downtown, along Winslow Street, buildings range from five to 10 stories. Specifically, three 10-story buildings, the San Mateo County Jail (300 Bradford Street), the Hall of Justice (400 County Center), and a residential building (575 Middlefield Road) are the tallest buildings in Redwood City. The next tallest structures are nine stories or less. While buildings in Downtown are generally taller than those outside of Downtown, the amended DTPP area is not particularly distinguishable from development across Veterans Boulevard to the north or across Maple Street to the south due to the irregular building footprint and building heights in the amended DTPP area.

Existing Building Character

Downtown’s largest buildings are located south of Broadway, between the Caltrain tracks and Walnut Street, and along Main Street between Broadway and Middlefield Road. Buildings in this

area have little or no front and side yard setbacks. Elsewhere in the amended DTPP area, building footprints and heights are more variable and less distinctive; and are interspersed with surface parking lots, which makes the area surrounding the Downtown core feel less cohesive.

Surrounding Visual Character

The amended DTPP area is bordered on three sides by residential neighborhoods: Mezesville, Sequoia, Central, and Stambaugh-Heller.

The Mezesville neighborhood is northwest of the amended DTPP area, across Brewster Avenue. This neighborhood contains primarily low-density residential development, which stands in contrast to the more densely developed Downtown area to the south. This neighborhood contains mostly 1- to 2-story homes with front lawns, mature trees, and sidewalk planting strips. The neighborhood contains wide residential streets, which contributes to a feeling of openness, especially when compared to the dense urban character of Downtown to the south.

The Sequoia neighborhood is southwest of the amended DTPP area, across El Camino Real between Whipple Avenue and Jefferson Avenue. This neighborhood contains traditional low-density single-family homes with mature tree-lined streets, front yard setbacks, and sidewalks. This neighborhood includes the Sequoia High School, which comprises an entire city block.

The Central neighborhood is southwest of the amended DTPP area, across El Camino Real between Jefferson Avenue and Redwood Avenue. This neighborhood contains duplexes and 2- to 4-story apartment buildings, post-war single-family homes, and wide streets. The visual character is of an urbanized neighborhood that is mostly built out.

The Stambaugh-Heller neighborhood borders the amended DTPP area on the southeast, between El Camino Real and Veterans Boulevard. This residential neighborhood a relatively densely developed environment with a central cluster of historic-era architectural design forms. This neighborhood also features Jardin de Niños, a park at the corner of Chestnut Street and Middlefield Road, which provides a focal point for the neighborhood. The streetscapes are lined with overhead power lines, broken and narrow sidewalks, and very few street trees or areas of landscaping. The Caltrain tracks also provide a notable manmade visual feature to the neighborhood.

6.1.4 Light and Glare

There are two types of artificial, or man-made, light sources: (1) direct sources (e.g., illuminated signage, street light poles, vehicle headlights); and (2) indirect sources of reflected light (e.g., reflective or light-colored surfaces). The effect produced by direct and indirect light sources that is perceived as excessive brightness is commonly referred to as “glare.” The effect of direct and indirect sources of light during the night is referred to as spill light.

Direct sources of light in the amended DTPP area are generally limited to light posts in the Sequoia Station and Transit Center surface parking lots, overhead street lights on streets such as El Camino Real, and interior lighting sources used in commercial and residential buildings. Street lighting sources are responsible for nighttime spill light.

6.1.5 Shadow

Shadows cast by structures vary in length and direction throughout the day and from season to season. In the summer, the sun is highest in the sky and shadows are the shortest at any given time of day; in the spring/autumn the sun's position is nearly identical to the opposite equinox and represent the midway point between the winter and summer solstices; and in the winter, the sun is lowest in the sky and shadows are the longest at any given time of day. The winter solstice, therefore, represents the “worst-case” shadow condition and the time when the potential for loss of access to sunlight due to an adjacent structure is the greatest.

The DTPP identifies 10 open spaces in the DTPP area as being “shadow-sensitive public open spaces.” Pursuant to the DTPP, shadow-sensitive open spaces are owned or operated by the City of Redwood City; not planned to be removed in the future; 1/10 of an acre or more in size; and not located in the interior of a block. The 10 shadow-sensitive open spaces identified in the DTPP are Courthouse Square, Theatre Way, City Hall courtyard, Roselli Garden and Mini-Park, Library Plaza, Hamilton Green (planned), Depot Circle (planned at the time of DTPP adoption; now developed as Depot Plaza), Little River Park,² Redwood Creek Park (then planned and now developed), and City Center Plaza. Shadow-sensitive land uses also include parks and open spaces, representative residential properties outside but adjacent to the amended DTPP area,³ light-sensitive historic building features,⁴ and historic building facades.⁵ These land uses are considered shadow sensitive because they benefit from the availability of sunlight, and the loss of this amenity could represent an environmental impact.

6.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP EIR in 2011. DTPP EIR Chapter 6, *Aesthetics*, Section 6.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

6.2.1 City of Redwood City General Plan

The City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. Goals and policies relevant to aesthetics and shadows include the following:

- ² Little River Park is proposed to be removed and replaced with a new publicly accessible open space as part of one of the proposed Gatekeeper projects, at 901 El Camino Real.
- ³ The representative residential properties outside but adjacent to the amended DTPP area include residential properties at the following locations: Brewster Avenue at Allerton Street, Brewster Avenue at Broadway, Jefferson Avenue at Adams Street, Madison Avenue at Adams Street, Maple Street at Middlefield Road, Maple Street at Hilton Street, and Maple Street at Broadway.
- ⁴ This analysis considers the same light-sensitive building features considered in the DTPP Final EIR: the dome/rotunda of the historic San Mateo County Courthouse.
- ⁵ The historic facades considered in the DTPP Final EIR and in this analysis are listed in Appendix 21.3.2 of the DTPP Final EIR.

- *Policy BE-1.1:* Maintain and enhance the beneficial and unique character of the different neighborhoods, corridors, and centers, and open spaces that define Redwood City.
- *Policy BE-1.2:* Promote the identity of Redwood City as a special place within the Bay Area.
- *Policy BE-1.3:* Provide attractive entrance designs at city gateways that welcome visitors and promote memorable characteristics of Redwood City.
- *Policy BE-3.1:* Provide high-quality public streetscapes in all neighborhoods, particularly in locations where new investment in historic property renovation and infill development are desired.
- *Policy BE-3.4:* Encourage building forms that create coherent and consistent street frontages on blocks that emphasize the visibility of entrance doors, porches, stoops and/or entrance patios.
- *Policy BE-11.3:* Plan for and accommodate mixed-use projects along corridors, where a site or sites are developed in an integrated, compatible, and comprehensively planned manner involving two or more land uses. Combine residential and office uses with commercial development to reduce automobile trips and encourage walking, and facilitate compact, sustainable development.
- *Policy BE-12.1:* Integrate land use and transportation planning and development to transform El Camino Real to an urban, pedestrian-friendly, and transit-oriented boulevard for residents to live, work, shop and play.
- *Policy BE-12.2:* Encourage the replacement of older low-scale, auto-oriented development with well-designed new projects that offer pedestrian orientation, higher densities with more efficient use of land, and continued productive economic value.
- *Policy BE-12.5:* Provide vibrant public spaces and gathering places along the El Camino Real Corridor.
- *Goal BE-18:* Make Downtown the premier urban location on the Peninsula for business, government functions, shopping, dining, living, and entertainment, with attractive buildings and streetscapes that respect and respond to Redwood City's history.
- *Policy BE-18.2:* Allow for a range of uses, building types, and building heights, to promote diverse mixed-use development, pedestrian activity, and a vibrant city center.
- *Policy BE-18.4:* Require residential, office, and governmental agency buildings and sites to be designed to encourage pedestrian activity, through street character, plazas, and other features and amenities that enhance Downtown's viability.
- *Policy BE-18.6:* Continue to foster pedestrian-oriented redevelopment in areas surrounding the Caltrain Station. Prioritize redevelopment of the Middlefield Parking Lot and other public owned land in the vicinity to support Downtown activity.

6.2.2 Redwood City Zoning Code

The Redwood City Zoning Code (Zoning Code) implements the General Plan. The Zoning Code establishes specific standards for the use and development of properties and regulates development intensity using methods such as minimum lot size and setbacks, maximum lot coverage, height, and floor area ratio. The Zoning Map indicates the boundaries of the DTPP, and the DTPP rather

than the Zoning Code provides applicable land use controls and development standards within those boundaries.

6.2.3 Redwood City Architectural Advisory Committee

The Redwood City Architectural Advisory Committee addresses architectural design and form of structures in the City and implements Article 45 of the Redwood City Zoning Code.

6.2.4 Redwood City Downtown Precise Plan (DTPP)

The DTPP controls land use and development regulations in Downtown Redwood City. The DTPP imposes “standards” (mandatory) and “guidelines” (permissive) to guide new development, including permitted land uses; building heights and disposition; architectural character (including façade design and composition); site design and planning (including building placement, parking, and landscaping); signage; public frontages, streets, and streetscapes; and preservation and maintenance of historic resources.

The entire downtown is intended to be a lively, mixed-use area, and the DTPP is broken into “Use Zones,” which include the following zones: Entertainment District; Downtown Core; Downtown General; and a sub-zone required active ground floor uses. In general, the Entertainment District and Downtown Core zones are along Broadway, El Camino Real, and Middlefield Road, with the Downtown General zone comprising the rest of the amended DTPP area.

6.3 Impacts and Mitigation Measures

6.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe aesthetics impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

6.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines indicate that a significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- a) have a substantial adverse effect on a scenic vista; or
- b) substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway; or
- c) conflict with applicable zoning and other regulations governing scenic quality; or
- d) create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Although shadow is not explicitly set forth as a topic for consideration in the CEQA Checklist, the DTPP Final EIR included a threshold of significance related to shadow impacts in response to litigation over this issue. Accordingly, this SEIR also evaluates shadow impacts, using the Final EIR's threshold. That threshold states that a significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- e) Cast shadow that substantially impairs the beneficial use, important values, or livability of any shadow-sensitive use, including public parks, plazas or open space areas; buildings using passive solar heat collection or solar collectors; historic resources with a shadow-sensitive character-defining feature; or shadow-sensitive portions of residential parcels.

Consistent with the shadow impact threshold in the DTPP Final EIR, criterion (e), concerning shadow, is evaluated as follows: a significant impact would occur due to substantial impairment of a shadow-sensitive use if any new structure permitted pursuant to DTPP Plan-Wide Amendments would cause more than 50 percent of the following shadow-sensitive uses and spaces to be shaded at 12:00 noon on the Spring Equinox: ten designated public parks, plazas, and open spaces within the Downtown area; Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights; residential properties located outside but adjacent to the DTPP area;⁶ light-sensitive historic building features;⁷ and historic building facades.⁸ The DTPP Final EIR concluded that a threshold of 50 percent shadow at noon on the spring equinox (essentially mirrored by shadows at noon on the fall equinox) represents a reasonable balance between sun and shade, recognizing that shade may also be desirable during hotter times of the day and year.

At the time the DTPP Final EIR was prepared, Appendix G of the CEQA Guidelines did not specify a different significance criterion for projects in urbanized areas from those located in rural areas. Thus, the DTPP Final EIR evaluated whether the DTPP would substantially degrade the existing visual character or quality of the area and its surroundings. However, in December 2018, Appendix G of the CEQA Guidelines was modified to reflect recent changes to the CEQA statutes and court decisions. Specifically, the discussion of visual character and quality in topic "c" pertains to public views in non-urbanized areas, whereas for projects in urbanized areas, Appendix G suggests that the analysis consider whether the project would conflict with applicable zoning and other regulations governing scenic quality.

Appendix G of the CEQA Guidelines does not contain a criterion related to shading, and thus criterion (e) above derives from the DTPP Final EIR, and allows city decision-makers to consider

⁶ The representative residential properties outside but adjacent to the DTPP area include residential properties at the following locations: Brewster Avenue at Allerton Street, Brewster Avenue at Broadway, Jefferson Avenue at Adams Street, Madison Avenue at Adams Street, Maple Street at Middlefield Road, Maple Street at Hilton Street, and Maple Street at Broadway.

⁷ This analysis considers the same light-sensitive building features considered in the DTPP Final EIR: the dome/rotunda of the historic San Mateo County Courthouse.

⁸ The 46 historic facades considered in the DTPP Final EIR and in this analysis are listed in Appendix 21.3.2 of the DTPP Final EIR. The historic facades that were not completely shaded at noon on the Spring Equinox under then-existing conditions were mapped for this analysis using Google Maps in 2022.

whether the proposed project would result in shadow that could have significant effects on shadow-sensitive uses as defined.

Finally, it should also be noted that CEQA Section 21099(d), which was added to the statute in 2019, states that “Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment.”

6.3.3 Impacts and Mitigation Measures

This SEIR assumes that development pursuant to the proposed DTPP Plan-Wide Amendments would indirectly result in an additional 1,167,100 net new square feet of office space compared to the DTPP EIR, along with an additional 830 dwelling units. This amount of development would be consistent with that proposed by the six Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP. The DTPP Plan-Wide Amendments would also permit limited exceptions to building placement, required minimum height, and height stepdown zones, and would allow rooftop structures that support active, recreational rooftop uses, although the existing maximum permitted building heights would not change. Overall, impacts related to aesthetics and shadow would be the same under the DTPP Plan-Wide Amendments as the DTPP EIR.

Impact AE-1: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on a scenic vista. (*Less than Significant*)

The DTPP Final EIR found that no scenic vistas or view corridors would be substantially obstructed or degraded by future development in accordance with the DTPP. Scenic vistas in Redwood City are visible primarily in the city's western hills. The FEIR further found that the DTPP would promote a more discernable and distinctive Downtown form and skyline, and that impacts on scenic vistas would be less than significant. No mitigation measures were necessary.

The DTPP Plan-Wide Amendments would not make any changes in allowable maximum building heights;⁹ however, the DTPP Plan-Wide Amendments would introduce some development flexibility by permitting limited exceptions to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner setbacks, other setbacks from the street, and lesser lot coverage than is currently required; allowing rooftop structures that support active, recreational rooftop uses; and adjusting the required minimum heights from the current requirement of 35 feet to stories, at between 25 feet and 35 feet, and further adjustment with a potential exception. The exceptions noted above would allow for reduced massing and shadows, an enhanced pedestrian experience, and provide support for ground floor retail; none of these changes would result in adverse physical effects, because the changes would allow for the potential to reduce building massing, compared to what is currently permitted. Structures supporting active rooftop uses would be limited in height to 10 feet—the

⁹ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

same as the existing maximum height for rooftop mechanical enclosures—and would be limited in footprint to no more than half the floor area of the story immediately below. Therefore, any potential increase in shadow from such structures would be anticipated to be limited.

This SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area, including within a relatively small anticipated future northward expansion of the Plan area. This growth would result in a more densely developed amended DTPP area. Because the amended DTPP area is relatively flat, and since the overall maximum building heights would not change (other than in the case of the five parcels that may be added to the DTPP area as part of a subsequent project-specific approval), the proposed DTPP Plan-Wide Amendments would not substantially obstruct or degrade scenic vistas. Views of the Redwood Shores lagoons would not be affected due to the distance between the amended DTPP area and the lagoons. Views of the western hills would still be available from multiple publicly accessible vantage points within or adjacent to the amended DTPP area, including from James Avenue, Brewster Avenue, Broadway and Arguello Street, and Jefferson Avenue and El Camino Real when looking west. In addition, as stated in the DTPP Final EIR, views of the Downtown Redwood City skyline and the San Francisco Bay from four vantage points in the western hills: Easter Cross, Easter Bowl, Cañada College, and Edgewood Park and Natural Preserve, would generally be improved. This is because the proposed DTPP Plan-Wide Amendments would create a more discernable Downtown when viewed from long distance and higher elevations. The DTPP Final EIR concluded the DTPP would contribute to a “mounding” of buildings concentrated near the center of Downtown, thus resulting in a more discernable and distinctive Downtown form and skyline. Implementation of the proposed DTPP Plan-Wide Amendments would maintain to this condition. Therefore, the DTPP Plan-Wide Amendments would not result in new or more severe impacts than were identified in the DTPP Final EIR, and impacts on scenic vistas would be *less than significant*.

Mitigation: None required.

Impact AE-2: Implementation of the DTPP Plan-Wide Amendments would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (*Less than Significant*)

The DTPP Final EIR found that the changes resulting from the DTPP would not be visible from Interstate 280 due to the varied topography and intervening vegetation. Interstate 280 is the only designated scenic highway in Redwood City. Thus, the DTPP Final EIR concluded that impacts to state scenic highways would be less than significant. No mitigation measures were necessary.

The proposed DTPP Plan-Wide Amendments would not make any changes in allowable maximum building heights;¹⁰ therefore, the DTPP Plan-Wide Amendments would likewise not be

¹⁰ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

visible from Interstate 280 due to the varied topography and intervening vegetation, and would not result in impacts to state scenic highways. The DTPP Plan-Wide Amendments would not result in a new or more severe impact than that identified in the Final DTPP EIR. Therefore, the impact would be *less than significant*.

Mitigation: None required.

Impact AE-3: Implementation of the DTPP Plan-Wide Amendments would not conflict with applicable zoning and other regulations governing scenic quality. (*Less than Significant*)

The DTPP Final EIR found that implementation of the DTPP would promote a more appealing and coherent visual character in Downtown, when considering that it would provide a discernible and distinctive downtown form; substantially improve building height scale relationships at sensitive transitions to adjacent low-rise neighborhoods; and enhance downtown historic character. Thus, the DTPP Final EIR concluded that impacts on visual character would be less than significant. No mitigation measures were necessary.

Applicable zoning and other regulations governing scenic quality are listed in the DTPP Final EIR (see pp. 6-5 to 6-12) and include the 2010 General Plan, Zoning Code, and the Redwood City Architectural Advisory Committee (Resolution 11497).

2010 General Plan

The 2010 General Plan goals and policies related to scenic quality include integrating buildings into the surrounding environment; shaping identity and pursuing “place-making” along major corridors and in centers through re-use and intensification, mixed-use development, and streetscape enhancements; and creating complete residential neighborhoods whereby residents can walk or bike to leisure or civic activities in 20 minutes or less.

The proposed DTPP Plan-Wide Amendments would include changes to certain development standards, guidelines and policies, including allowing Research and Development Laboratory space as a conditional use; amending height and massing regulations to permit limited exceptions to standards such as building placement, required minimum height, and height stepdown zones, and to allow rooftop structures that support active, recreational rooftop uses (but not alter the permitted maximum building height); parking ratios and circulation policies. This SEIR assumes that the DTPP Plan-Wide Amendments would indirectly result in an additional 830 dwelling units and 1,167,100 net new square feet of office space compared to the amount of development analyzed in the DTPP EIR. This additional development would be sufficient to accommodate the six Gatekeeper Project sites and an additional increment of both office and residential growth.

The proposed DTPP Plan-Wide Amendments would not conflict with the 2010 General Plan because it would involve street vacations/closures that create a more pedestrian-oriented environment Downtown that would support General Plan policies BE-12.1, BE-12.2, BE-18.2, BE-18.4 and BE-18.6, which call for the development of pedestrian-friendly streetscapes.

In addition, the proposed DTPP Plan-Wide Amendments would be consistent with goals related to “place-making” along major corridors and in centers through mixed-use development because it would include increased development intensity along major corridors such as El Camino Real and Broadway, supporting policies BE-12.5 and BE-12.6. Finally, the DTPP Plan-Wide Amendments would include housing in close proximity to transit, which would be consistent with Policy BE-11.3 related to encouraging dense development whereby residents are within a 20-minute walk or bike ride from leisure or civic activities. Therefore, the proposed DTPP Plan-Wide Amendments would not conflict with the 2010 General Plan as it relates to scenic quality.

Redwood City Zoning Code

The Zoning Code pertains to scenic quality because it includes regulations related to building coverage, building height, and building setbacks, although the DTPP rather than the Zoning Code provides land use controls and development standards within the amended DTPP area. The proposed DTPP Plan-Wide Amendments would include changes to build-to-corner, height stepdown, and side setback requirements that would allow the City to grant exceptions in exchange for provisions of community benefits (see Section 3.5.1 for a full description). In addition, rooftop structures that support active, recreational rooftop uses, now prohibited, would be permissible. However, there would be no changes to the existing height limits (i.e., the maximum building height would not change, except potentially in the case of the five parcels that could be added to the DTPP area as part of a subsequent project-specific approval).

Because the proposed DTPP Plan-Wide Amendments would amend DTPP figures to implement changes related to building height and massing, the proposed DTPP Plan-Wide Amendments would be brought into conformance with applicable development standards. This SEIR also evaluates a potential future extension of the northern DTPP area boundary by about 0.1 miles between El Camino Real and the Caltrain tracks. Thus, any conflicts between the proposed DTPP Plan-Wide Amendments and applicable design standards would be resolved and the proposed DTPP Plan-Wide Amendments would be consistent with the City’s desired vision for a densely developed downtown urban core visual character.

DTPP and Redwood City Architectural Advisory Committee

The DTPP development regulations address the availability of sunlight (and shadow), building massing, building setbacks, and landscape requirements. Sunlight (and shadow) are discussed below under Impact AE-5. The Redwood City Architectural Advisory Committee addresses architectural design and form of structures in the City. As stated above, the proposed DTPP Plan-Wide Amendments would allow exceptions to build-to-corner, height stepdown, and side setback requirements, but would not change the existing height limits (i.e., the maximum building height would not change, except potentially for the five parcels noted above).

The changes under the proposed DTPP Plan-Wide Amendments would allow for exceptions, at certain sites, to requirements concerning building placement and required minimum heights in a manner that would allow for reduced massing. Therefore, no conflict would arise with respect to plans adopted for the purpose of avoiding environmental effects.

As stated earlier, the DTPP Final EIR found that implementation of the DTPP would promote a more appealing and coherent visual character in Downtown, and that impacts on visual character would be less than significant. Because the allowable maximum building heights would not change, except potentially for the five parcels noted above, the proposed DTPP Plan-Wide Amendments would similarly promote a more appealing and coherent visual character in Downtown. Moreover, the proposed DTPP Plan-Wide Amendments would seek to amend the DTPP to resolve any conflicts with these regulations, including amendments for DTPP Public Frontages and Use Regulations; allowance for exceptions to mandatory standards in the DTPP Development Regulations for sites identified as potentially providing privately-owned publicly-accessible open space as identified in the DTPP; and changes to the DTPP figures to reflect the amended DTPP. Thus, through amendments to the DTPP, the proposed DTPP Plan-Wide Amendments would not conflict with regulations governing scenic quality, and would not result in new or more severe impacts than those identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

Mitigation: None required.

Impact AE-4: Implementation of the DTPP Plan-Wide Amendments would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant*)

The DTPP Final EIR concluded that, because projects built pursuant to the DTPP would meet Title 24 standards, light and glare impacts would be less than significant. No mitigation measures were necessary.

This SEIR assumes that the DTPP Plan-Wide Amendments would indirectly result in increased development in the DTPP, which would result in additional spill light and glare in the amended DTPP area. Exterior lighting would be provided to illuminate different areas of the DTPP and surrounding plazas, and would include street lighting, sidewalk lighting, building perimeter lighting, emergency lighting, and outdoor security lighting along walkways, driveways, and plaza areas. New sources of light would be required to meet the LZ3 (medium) lighting power allowances in the California Building Standards Code Title 24 (Parts 1 and 6 – Outdoor Lighting Zones). Compliance with Title 24 standards would improve the quality of outdoor lighting and reduce the impacts of light pollution, light trespass and glare to less than significant levels. Therefore, the DTPP Plan-Wide Amendments would not result in a new or more severe impact on light and glare than the impact identified in the DTPP Final EIR. This impact would be *less than significant*.

Mitigation: None required.

Impact AE-5: Implementation of the DTPP Plan-Wide Amendments would not cast shadow that would substantially impair the beneficial use, important values, or livability of any shadow-sensitive use, including public parks, plazas or open space areas; buildings using passive solar heat collection or solar collectors; historic resources with a shadow-sensitive character-defining feature; or shadow-sensitive portions of residential parcels. (*Less than Significant with Mitigation*)

While shadows are not generally considered a CEQA impact, the DTPP Final EIR analyzed shadow effects of the Plan following a Superior Court decision on this subject, and addressed concerns raised by the plaintiffs regarding the impact of shadows cast by development under the plan on: public parks, plazas, and open space areas within Downtown;¹¹ Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights; residential properties located outside but adjacent to the amended DTPP area; light-sensitive features on historic resources; and historic facades. The DTPP Final EIR concluded that the DTPP would not cause any shadow-sensitive uses or spaces to be more than 50 percent shaded at noon on the Spring Equinox. Thus, the DTPP Final EIR concluded that impacts on shadow would be less than significant. No mitigation measures were necessary.

Consistent with the shadow impact threshold in the DTPP Final EIR, a significant impact from the proposed DTPP Plan-Wide Amendments would occur if any new structure would cause more than 50 percent of the following shadow-sensitive uses and spaces to be shaded at noon on the Spring Equinox: specified public parks, plazas, and open spaces within the Downtown area; Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights; residential properties located outside but adjacent to the amended DTPP area;¹² light-sensitive historic building features;¹³ and historic building facades.¹⁴ The DTPP Final EIR concluded that a 50 percent shadow threshold represents a reasonable balance between sun and shade, recognizing that shade may also be desirable during hotter times of the day and year.

As discussed above, the proposed DTPP Plan-Wide Amendments would not make any changes in allowable maximum building heights;¹⁵ however, the DTPP Plan-Wide Amendments would introduce some flexibility by permitting limited exceptions to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner

¹¹ Consistent with the DTPP Final EIR, public parks, plazas, and open spaces considered in this analysis include Courthouse Square, Theater Way, City Hall courtyard, Roselli Garden and Mini-Park, Library Plaza, Hamilton Green (planned), Depot Circle (planned at the time of DTPP adoption and now developed as Depot Plaza), Little River Park (proposed to be removed and replaced with new publicly accessible open space as part of one of the proposed Gatekeeper projects, at 901 El Camino Real), Redwood Creek Park (then planned and now developed), and City Center Plaza.

¹² The representative residential properties outside but adjacent to the DTPP area include residential properties at the following locations: Brewster Avenue at Allerton Street, Brewster Avenue at Broadway, Jefferson Avenue at Adams Street, Madison Avenue at Adams Street, Maple Street at Middlefield Road, Maple Street at Hilton Street, and Maple Street at Broadway.

¹³ This analysis considers the same light-sensitive building features considered in the DTPP Final EIR: the dome/rotunda of the historic San Mateo County Courthouse.

¹⁴ The historic facades considered in the DTPP Final EIR and in this analysis are listed in Appendix 21.3 of the DTPP Final EIR. The historic facades that were not completely shaded at noon on the Spring Equinox under then-existing conditions were mapped for this analysis using Google Maps in 2022.

¹⁵ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

setbacks, other setbacks from the street, and lesser lot coverage than is currently required; lowering the required minimum heights from 35 feet, with exceptions; and allowing project-specific exceptions for sites that are constrained by either the anticipated Caltrain track improvements and realignment or by creek or stormwater features, or that provide publicly accessible open space as identified by the City. These modifications and the assumed increase in development in the DTPP may result in a more densely developed amended DTPP area.

Should exceptions to height stepdown requirements or side setback requirements be granted for subsequent projects developed in the amended DTPP area (and under the DTPP Plan-Wide Amendments), bulkier buildings than originally anticipated under the DTPP could be developed, some of which could cast new shadow on public parks, plazas, and open space areas within Downtown, Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights; residential properties located outside but adjacent to the amended DTPP area; light-sensitive features on historic resources; and historic facades. Net new shadow could potentially increase shade on more than 50 percent of these features at noon on the Spring Equinox. This would represent a potentially significant impact. Therefore, subsequent development projects built pursuant to the DTPP Plan-Wide Amendments that would request an exception to a build-to-corner, height stepdown, and side setback requirement shall implement Mitigation Measure AE-5, which would reduce this potentially significant impact to a less-than-significant level.

Mitigation AE-5: Shadow Study for Exceptions to Building Placement and/or Building Height and Disposition Regulations.

Project applicants seeking exceptions to building placement and/or building height and disposition regulations in the DTPP such as exceptions to a build-to-corner, building setback, frontage coverage, height stepdown, or any other building placement or height or disposition regulation that would allow greater building massing than would otherwise be permitted shall demonstrate to the Redwood City Planning Services Division that the exceptions sought would be consistent with section 2.7.5 of the DTPP and would not result in shadow exceeding 50 percent on the shadow-sensitive uses and spaces identified therein at noon on the Spring Equinox, except that this requirement shall not apply to Downtown parcels with lower maximum permitted building heights adjacent to parcels with higher maximum permitted heights if the parcel(s) with lower height limits are the site of development subsequent to DTPP adoption.

Significance after Mitigation: Less than Significant. (New significant but mitigable impact, compared to DTPP Final EIR)

6.4 References

The City of Redwood City, *Downtown Precise Plan*, p. 89, Adopted on January 24, 2011. Last amended on June 11, 2018.

Google Maps, https://www.google.com/maps/@37.4863662,-122.2333525,16z/data=!3m1!4b1!4m2!6m1!1s1CWaH5cZEIiUKr__x1-qFF_zAe1c_Wzz, accessed February 2, 2022.

CHAPTER 7

Cultural and Historic Resources and Tribal Cultural Resources

This SEIR chapter analyzes the potential for the implementation of the DTPP Plan-Wide Amendments to result in substantial adverse effects on cultural resources and tribal cultural resources, including historic architectural resources, historic-age and pre-contact archaeological resources, and human remains. This section focuses on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

The DTPP Final EIR found that there would be a potentially significant impact to archaeological resources. Mitigation Measure 7-1, which established an inadvertent discovery protocol for cultural resources identified during project construction, reduced potential impacts to archaeological resources to a less-than-significant level.

The DTPP Final EIR also found that development on properties that contain historic architectural resources would constitute a significant impact. Mitigation 7-2 required that the City make a preliminary determination as to whether any discretionary projects would have a potentially significant adverse effect on historic resources. However, this mitigation was not considered sufficient to address project impacts, and the impact was found to be significant and unavoidable.

The DTPP Final EIR also found that historic districts could be significantly impacted by development and proposed Mitigation Measure 7-3 required that development within or adjacent to historic districts that require discretionary approval be reviewed by an architect or architectural historian to avoid a substantial adverse change to the historic district. This mitigation measure was found to reduce the impact of the DTPP on historic districts to a less-than-significant level.

The DTPP Final EIR also considered potential impacts due to development on properties adjacent to historic resources, and Mitigation Measure 7-4 required that proposed development adjacent to historic resources that require discretionary approval be reviewed by an architect or architectural historian to avoid a substantial adverse change to the historic resource. This mitigation measure reduced the impact of the DTPP on historic resources to a less-than-significant level.

7.1 Environmental Setting

7.1.1 Archaeological Setting

Categorizing the pre-contact period into broad cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given time frame, thereby creating a regional chronology. This section provides a brief discussion of the pre-contact chronology for the area known now as Redwood City.

Archaeologists developed individual cultural chronological sequences tailored to the archaeology and material culture of each sub-region of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Milliken *et al.* provide a framework for the interpretation of the San Francisco Bay Area.¹ The authors divided human history in California into three periods: the *Early Period*, the *Middle Period*, and the *Late Period*. In many parts of California four periods are defined; the fourth being the *Paleoindian Period* (11500–8000 B.C.), characterized by big-game hunters occupying broad geographic areas. Evidence of human habitation during the Paleoindian Period has not yet been discovered in the San Francisco Bay Area. Economic patterns, stylistic aspects, and regional phases further subdivide cultural periods into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

During the Early Period (Lower Archaic, 8000–3500 B.C.), geographic mobility continued from the Paleoindian Period and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during the Early Period (Middle Archaic, 3500–500 B.C.), indicating the beginning of a shift to sedentism. During the Middle Period, which includes the Lower Middle Period (Initial Upper Archaic, 500 B.C.–A.D. 430), and Upper Middle Period (Late Upper Archaic, A.D. 430–1050), geographic mobility may have continued, although groups began to establish longer term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian, and chert concave-base projectile points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the development of numerous small villages. Around A.D. 430, a dramatic cultural disruption occurred as evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the Initial Late Period (Lower Emergent, A.D. 1050–1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

¹ Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson, “Punctuated Cultural Change in the San Francisco Bay Area,” In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 99-124, AltaMira Press, Lanham, MD, 2007.

7.1.2 Ethnographic Setting

A compilation of ethnohistorical, historical, and archeological data indicates that the San Francisco Bay Area was inhabited by a cultural group known as the Ohlone before the arrival of Europeans.² While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these static descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this approach masks Native adaptability and self-identity. California’s Native Americans never saw themselves as members of larger cultural groups, as described by anthropologists. Instead, they saw themselves as members of specific village communities, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins.

Levy describes the language group spoken by the Ohlone (often referred to as “Costanoan” in the literature).³ This term is originally derived from a Spanish word designating the coastal peoples of Central California. Today, Costanoan is used as a linguistic term that refers to a larger language family that included distinct sociopolitical groups that spoke at least eight languages of the Penutian language group. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. The Redwood City area was occupied by Ramaytush dialect of Ohlone speakers.

Economically, the Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clam shell beads, and even shooting trespassers if caught.

In 1770, the Ohlone lived in approximately 50 separate and politically autonomous nations, and the number of Ramaytush speakers reached 1,400, substantially more than the typical size of a village, which ranged from 40 to 200 members. During the Mission Period (1770 to 1835), native populations, especially along the California coast, were brought—usually by force—to the missions by the Spanish missionaries to provide labor. The missionization caused the Ohlone people to experience cataclysmic changes in almost all areas of their life, particularly a massive decline in population caused by introduced diseases and declining birth rate, resulting in large part from colonization by the Spanish missionaries. Following the secularization of the missions by the Mexican government in the 1830s, most Native Americans gradually left the missions and established rancherias in the surrounding areas.⁴

² Milliken, Randall, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*, Ballena Press, Menlo Park, CA, 1995.

³ Levy, Richard, “Costanoan,” In *California*, edited by Robert F. Heizer, pp. 485-495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.

⁴ Ibid.

After European contact, Ohlone ways of life were severely disrupted by missionization, disease, and displacement. Today the Ohlone still have a strong presence in the San Francisco Bay Area and are very interested in their historic-era and pre-contact past. There are currently five Ohlone groups listed on the Native American Heritage Commission (NAHC) contact list for the Redwood City area.

7.1.3 Historic Setting

Spanish exploration and colonization of Alta California began in the mid-18th century. Under Mexican rule, the 69,120-acre Rancho de las Pulgas was granted to the Arguello family in 1835, and the rancho included the majority of present-day Redwood City. A local economy grew out of the rancho's goods and services, namely livestock, hides and tallow, and redwood logging, and a townsite developed in the vicinity of the wharf that provided access to a deep-water channel in San Francisco Bay.⁵

In the 1850s, the Arguellos transferred a portion of this land to Simon Mezes, who surveyed and subdivided the townsite that he named "Mezesville." The Town of Mezesville was located in the vicinity of the Embarcadero and northeast of El Camino Real, and the arrangement of its streets determined the present layout of downtown Redwood City. Redwood City was named the San Mateo County seat in 1856, and Mezes donated the land for the new courthouse.⁶

The San Francisco and San Jose Railroad Company introduced the San Francisco Peninsula's first passenger train service in 1863. The present Caltrain tracks follow the original alignment of the earliest regional railroad. The arrival of the railroad attracted new residents, increased land values, and brought new development to Redwood City, and the growing municipality became San Mateo County's first incorporated city in 1868. The area's shipping and lumber industries continued to thrive in the late 19th century.⁷

A major earthquake on April 18, 1906, caused widespread regional devastation, and many important buildings in Redwood City, including the county courthouse, were damaged beyond repair. A construction boom swept through the city's downtown in the following years, and many examples of early 20th-century architecture remain along Broadway and Main Street. During this period, roads were improved as automobile use increased, the city's police and fire departments were established, and the Port of Redwood City was relocated from the downtown area to its present location near the mouth of Redwood Creek.⁸

Many people found employment in Redwood City during the Great Depression. Under the Works Progress Administration (WPA) and Public Works Administration (PWA), a library, a city hall, and several county buildings were constructed. A municipal marina and an international deep-water port served by new road and rail connections supported waterfront industries including the

⁵ Downtown Precise Plan Draft EIR, pp. 7-1 to 7-2.

⁶ Ibid., p. 7-2.

⁷ Ibid., pp. 7-3 to 7-4.

⁸ Ibid., pp. 7-4 to 7-5.

Leslie Salt Company, a cement plant, and several fishing companies. During World War II, the U.S. Navy leased two berths at the city's port.⁹

Beginning in the mid-20th century, the San Francisco Peninsula attracted numerous technology companies, and this led to a thriving technology industry in the greater San Francisco Bay Area that continues to the present day. This is reflected in a population boom in Redwood City, where the pre-war population was 12,400 in 1940, and it more than tripled to 46,300 by 1960. Redwood City annexed 25 square miles of tidelands and salt ponds located between U.S. 101 and San Francisco Bay; lands adjacent to Menlo Park, Atherton, and San Carlos; and unincorporated territory toward the Santa Cruz Mountains. National trends in suburbanization focused residential, commercial, and industrial development outside of downtown areas, and downtown Redwood City experienced a period of economic decline during the 1950s and 1960s. The city's 1964 Downtown Development Plan, which proposed the demolition of numerous historic buildings in an attempt to revitalize the downtown area, was met with a lack of funding and was therefore not enacted.¹⁰

In 1977, community efforts in support of historic preservation resulted in the listing of the Redwood City Commercial Buildings Historic District in the National Register of Historic Places. This was followed by the adoption of the city's historic preservation ordinance and establishment of the Historic Resources Advisory Committee in 1980. Other civic improvements and successful historic preservation efforts during the 1980s slowly reversed the formerly deteriorated condition of the downtown area. Redwood City's 1990 General Plan included a comprehensive historic resources element, and the city attained Certified Local Government (CLG) accreditation in 1992.¹¹

In the early years of the 21st century, the Main Street Historic District was approved by the city council, the historic county courthouse was restored, and Courthouse Square was constructed on the site of Redwood City's original town square.¹² Since the launch of the DTPP planning process in 2007, Mezes Park was renovated, and the John Offerman House and the John Dielmann House were listed on the National Register.¹³

7.1.4 Previously Identified Cultural Resources

For the purposes of this section, cultural resources are defined as physical evidence or a place of past human activity, including sites, objects, landscapes, or structures of significance to a group of people traditionally associated with it. Archaeological resources can be both pre-contact and historic-age and consist of cultural resources that are on the surface or in the subsurface. Historic resources are age-eligible (i.e., 50 years old or older) buildings, structures, objects, sites, or districts that have been determined as significant and eligible for, or listed in, the National Register of Historic Places (National Register) and/or the California Register of Historical Resources

⁹ Ibid., p. 7-5.

¹⁰ Ibid., p. 7-6.

¹¹ Ibid.

¹² Ibid.

¹³ "Timeline," *Redwood City History*, <http://www.redwoodcityhistory.org/timeline>, accessed January 31, 2022.

(California Register) and/or the City of Redwood City Historic Inventory of Structures of Historic and Architectural Merit (local register).

ESA completed a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System on November 23, 2021 (File No. 21-0821). The review included the entire amended DTPP area.¹⁴ Previous surveys, studies, and site records were accessed. Records were also reviewed in the Built Environment Resources Directory for San Mateo County, which contains information on places of recognized historical significance including those evaluated for listing in the National Register, the California Register, the California Inventory of Historical Resources, California Historical Landmarks, and California Points of Historical Interest. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the amended DTPP area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

Identified Historic Resources

The DTPP Final EIR identified 47 individual historic resources and two historic districts recorded within the amended DTPP area, and these are listed in **Table 7-1**. None of the previously identified historic resources are located within or adjacent to the anticipated future northerly DTPP boundary extension area assumed in this SEIR.

The NWIC records search conducted for this SEIR identified one age-eligible property within the potential future DTPP boundary extension area. The commercial building at 667–673 El Camino Real (P-41-002550) was evaluated in 2011 and found ineligible for listing in the National Register and California Register because it lacked significance under any criteria. This building was not re-evaluated for this SEIR because it is unlikely that it has achieved significance in the intervening years.

Additionally, one age-eligible property adjacent to the potential future DTPP boundary extension area was identified in the DTPP Final EIR. The building at 701–713 Arguello Street, which is located directly across Brewster Avenue and outside the amended DTPP area, was identified as a potential historical resource because it was at least 50 years old at that time.¹⁵ For the purposes of this SEIR, this building is presumed to be eligible for listing in the California Register.

¹⁴ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

¹⁵ Downtown Precise Plan Draft EIR, p. 7-27.

**TABLE 7-1
CEQA-DEFINED HISTORIC RESOURCES WITHIN THE DTPP AREA**

Address	Assessor Parcel Number(s)	Name/Description	Primary Number	Note
—	Multiple	Main Street Historic District		City-designated and eligible for listing in the National Register
—	Multiple	Historic Commercial Buildings District	P-41-000178	Contained within the Main Street Historic District and listed in the National Register
201 Arch Street	052195100, 052195090	Old Safeway Market		
2000 Broadway	052374180	Bank of San Mateo County	P-41-000800	Contributor to Historic Commercial Buildings District
2020 Broadway	052374100	Fitzpatrick Building	P-41-000801	Contributor to Historic Commercial Buildings District
2022–2024 Broadway	052374100	San Mateo County Building and Loan Association	P-41-000802	Contributor to Historic Commercial Buildings District
2200 Broadway	052367010	San Mateo County Courthouse	P-41-000174	
2201 Broadway	052365040	Art Deco-style building abutting east side of Fox Theater		
2215 Broadway	052365090	Fox Theater	P-41-000748	
2227 Broadway	052365020	Art Deco-style building abutting west side of Fox Theater		
2301–2303 Broadway	052362090	Mayers Building		
2317 Broadway	052362080	Sequoia Building		
2603 Broadway	052322070	Andrew Building	P-41-002282	
2620 Broadway	052321080	Currently City Pub		
2650 Broadway	052321120	Originally Redwood Pastry Shop		
2726–2744 Broadway	052195070, 052195080	“One commercial building, Art Deco, tiled”		
28 Diller	053176150	—	P-41-000504	
753 El Camino Real	052321160	—		
1100 El Camino Real	053045230	Roy’s Drive-In Cleaners		
1322 El Camino Real	053063090	—		
127 Franklin	053173090	Holmquist House	P-41-000503	
301 Fuller	052331130	House		
321 Fuller	052331080	House		
627 Hamilton	052344140	Lathrop House	P-41-000187	
620 Jefferson	052347090	Originally Hanson Lumber Co. employee housing		

TABLE 7-1 (CONTINUED)
CEQA-DEFINED HISTORIC RESOURCES WITHIN THE DTPP AREA

Address	Assessor Parcel Number(s)	Name/Description	Primary Number	Note
855 Jefferson	053131190	Redwood City Post Office		
1217 Jefferson	053045230	Commercial		
726 Main	052374140	Diller-Chamberlain Store/Quong Lee Laundry	P-41-000799	Contributor to Historic Commercial Buildings District
800 Main, 2001–2013 Broadway	05131050	Sequoia Hotel	P-41-000742	
831–835 Main	053233230	Alhambra Theater/ Masonic Temple		
839 Main	053233130	IOOF Building		
847–849 Main	053233120	Originally Clifton Motor Co.		
901 Main	053135010	William P. Jamieson Building	P-41-000758	
917–921 Main	053135120	Pseudo-Gothic commercial building		
929 Main	053135260	Originally Sunshine Grocery Store		
935 Main	053135270	Originally Flynn's Ford Agency		
1018 Main	053137020	John Offerman House		
1020 Main	053137020	John Dielmann House		
605 Middlefield	052347060	—		
611 Middlefield	052347050	Queen Anne-style cottage		
727 Middlefield	052368030	Pacific Telephone and Telegraph Building		
1044 Middlefield	053134060	Old Fire Station No. 1/Main Library	P-41-000759	
53–55 Perry	052321270, 052321260	Elgin's Auto Supply and Machine Shop Service	P-41-002494	
114 Stambaugh	053135020	Holmquist Hardware		
116 Stambaugh	053135040	Eugene Mouroth House	P-41-000789	
142 Stambaugh	053135050	Fred and Hannah Kirste House	P-41-000773	
530 Warren	052332010	House		
103 Wilson	053171040	House	P-41-000501	
700–710 Winslow	052361030	Falcone Building		

SOURCE: DTPP Draft EIR, 2010, pp. 7-9–7-11.

Within the potential future DTPP boundary extension area, there are two age-eligible properties located on the same parcel that were not identified in the NWIC records search. The McGarvey House at 649 El Camino Real is currently listed on the Redwood City Historical Resources Inventory. Two recent evaluations have found that the McGarvey House is neither a historical resource under CEQA nor eligible for listing Redwood City Historical Resources Inventory.¹⁶ Nevertheless, given this property's existing listing on the City's Inventory, this SEIR conservatively considers the McGarvey House to be a historical resource, at least until such time as the existing listing may be updated. The American Legion Post No. 105 at 651 El Camino Real is age eligible was evaluated for this SEIR and determined not to be eligible the National Register, California Register, or local register.¹⁷

Identified Archaeological Resources

The NWIC records search indicated that one potential historic-age archaeological resource is recorded within the amended DTPP area. The Mezes Plaza, P-41-000461, are a series of foundations and trash scatters within a block in downtown Redwood City associated with the historic-age Mezesville. This resource has not been formally evaluated for the California Register or National Register. The record search did not identify any archaeological resources within the potential future DTPP boundary extension area. The nearest pre-contact archaeological resource is approximately 550 feet southeast of the amended DTPP area.

Identified Tribal Cultural Resources

Native American Consultation

In accordance with the requirements of Senate Bill 18 (SB 18) and Assembly Bill 52 (Public Resources Code Section 21074(a)), City staff conducted Native American outreach and consultation efforts. ESA sent a Sacred Lands File and Native American Contacts List Request to the Native American Heritage Commission (NAHC) on October 20, 2021. The request included a request for a search of the NAHC Sacred Lands File and a list of contacts for tribes with traditional lands or cultural places within or near the amended DTPP area and potential DTPP boundary extension area. On November 2, 2021, the City sent tribal outreach letters to six Native American representatives from five tribes that were identified by the City based on prior consultation. The NAHC responded on November 29, 2021, with a letter that indicated the results of the search of the Sacred Lands File were negative. The letter also included a list of Native American contacts, and on November 30, the City sent tribal outreach letters to the four additional Native American representatives that were identified by the NAHC that were not on the City's original list. No responses were received within 90 days of receipt of the consultation letters, and no responses have been received as of July 27, 2022.

¹⁶ A historic resource evaluation of the McGarvey House at 649 El Camino Real was prepared by TreanorHL in November 2021, and Environmental Science Associates prepared a peer review in January 2022. Both documents recommend that the building is not eligible for listing on the Redwood City Historical Resources Inventory or the California Register because it lacks significance under any criteria.

¹⁷ Environmental Science Associates, "Historic Resource Evaluation for 651 El Camino Real, Redwood City," August 25, 2022.

Identification of Tribal Cultural Resources and Pre-contact Cultural Resources

The results of the records search undertaken at the NWIC is detailed above. No pre-contact resources have been identified within the amended DTPP area or potential DTPP boundary extension area. The nearest resource with a pre-contact component is approximately 550 feet outside of the amended DTPP area and 3,850 feet from the potential DTPP boundary extension area. No additional cultural resources or tribal cultural resources were identified as a result of tribal consultation.

7.2 Regulatory Setting

Section 7.2 of DTPP Final EIR Chapter 7, *Cultural and Historic Resources*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. This section also includes the regulatory setting for tribal cultural resources, which were not separately analyzed in the DTPP Final EIR. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

7.2.1 Federal

American Indian Religious Freedom Act

The American Indian Religious Freedom Act of 1978 protects the rights of Native Americans to freedom of expression of traditional religions (24 U.S.C. Section 1996). This act established “the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions... including but not limited to access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites.”

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act provides for increased involvement of Native Americans in archaeology and historic preservation. The Native American Graves Protection and Repatriation Act addresses the rights of lineal descendants and Indian tribes to recover Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are held by the federal government (25 U.S.C. Section 3001). These parties are to be consulted when such items are inadvertently discovered or intentionally excavated on federal or tribal lands.

7.2.2 State

The State of California implements the National Historic Preservation Act (NHPA) of 1966, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation, as an office of the California Department of Parks and Recreation, implements the policies of the preservation act on a statewide level. The Office of Historic Preservation also maintains the California Historical Resources Inventory. The State

Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the state’s jurisdictions.

Public Resources Code

Assembly Bill 52 (AB 52), enacted in September 2014, amended CEQA to explicitly recognize that California Native American tribes have expertise with regard to their tribal history and practices. AB 52 established a new category of cultural resources known as tribal cultural resources in order to consider tribal cultural values when determining impacts on cultural resources. Public Resources Code Section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in Public Resources Code Section 5020.1(k).¹⁸
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c).¹⁹ In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the criteria of CEQA Section 21074(a)²⁰ also is a tribal cultural resource if the landscape is geographically defined in terms of the size and scope.
- An historical resource as described in CEQA Section 21084.1,²¹ a unique archaeological resource as defined in CEQA Section 21083.2,²² or a non-unique archaeological resource as defined in CEQA Section 21083.2²³ may also be a tribal cultural resource if it meets the criteria of CEQA Section 21074(a).

¹⁸ Public Resources Code Section 5020.1(k) defines “local register of historical resources” as “a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution.”

¹⁹ The criteria set forth in Public Resources Code Section 5024.1(c) include whether a resource: “(1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage. (2) Is associated with the lives of persons important in our past. (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. (4) Has yielded, or may be likely to yield, information important in prehistory or history.”

²⁰ A cultural landscape meets the criteria of Public Resources Code Section 21074(a) if it either is “included or determined to be eligible for inclusion in the California Register of Historical Resources” or is “included in a local register of historical resources” pursuant to Section 5020.1(k).

²¹ Public Resources Code Section 21084.1 defines an “historical resource” as “a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources.”

²² Public Resources Code Section 21083.2(g) defines “unique archaeological resource” as “an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information. (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type. (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.”

²³ Public Resources Code Section 21083.2(h) defines “nonunique archaeological resource” as “an archaeological artifact, object, or site which does not meet the criteria in subdivision (g).”

AB 52 requires lead agencies to analyze project impacts on tribal cultural resources separately from archaeological resources (Public Resources Code Sections 21074, 21083.09), in recognition that archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines “tribal cultural resources” in Public Resources Code Section 21074 (see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (Public Resources Code Sections 21080.3.1, 21080.3.2, 21082.3).

Assembly Bill 168 – Tribal Consultation under Streamlined Ministerial Approval Process (SB 35)

Assembly Bill 168 (AB 168), enacted in September 2020, amended the Government Code Sections 65400, 65913.4, and 65941.1, to add tribal consultation requirements to housing projects which would otherwise qualify for a streamlined ministerial approval process which was mandated by Senate Bill 35 (SB 35) in 2017. SB 35 requires cities who are not meeting their demand for housing (as per the Regional Housing Needs Assessments) to allow developers to avoid the requirement of a CEQA document if the proposed housing meeting specific requirements, such as the number of units, zoning, affordability, and avoidance of specific environmental impacts. AB 168 added a requirement to SB 35 prescribes that developers must submit a preliminary application with information about the project and the local government must conduct tribal consultation with tribes, similar to what is required by CEQA and AB 52, to identify if there are tribal cultural resources that may be impacted by the project. If impacts to tribal cultural resources are identified, the project is ineligible for SB 35 streamlining and is subject to CEQA.

Senate Bill 18

Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code section 65300 et seq.) and specific plans (defined in Government Code section 65450 et seq.). The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.

Native American Heritage Commission

The NAHC identifies and manages a catalog of places of special religious or social significance to Native Americans. This database, known as the Sacred Lands File, is a compilation of information on known graves and cemeteries of Native Americans on private lands and other places of cultural or religious significance to the Native American community. The NAHC also performs other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items.

Public Resources Code Sections 5097.9 through 5097.991 describe the duties and role of the NAHC and requires the cooperation of State and local agencies in carrying out their duties with respect to Native American resources.

Certified Local Government

The Certified Local Government (CLG) Program was established in 1980 to facilitate cooperation between governments at the local, state, and federal levels to promote historic preservation initiatives. The program is jointly administered by the National Park Service and each State Historic Preservation Office.²⁴ There are currently 2,074 CLGs in the United States, including 69 in California.²⁵ To become certified, a local government must meet the following requirements:

- Establish a qualified historic preservation commission;
- Enforce appropriate State or local legislation for the designation and protection of historic properties (in most cases this is done in the form of a local ordinance);
- Maintain a system for the survey and inventory of local historic resources;
- Facilitate public participation in the local preservation, including participation in the National Register listing process; and
- Follow additional requirements outlined in the State’s CLG Procedures. Each state has Procedures for Certification that may establish additional requirements for becoming a CLG in that State.²⁶

Redwood City attained CLG status on November 20, 1992.

7.2.3 Local

As a CLG, Redwood City, has a series of policies, plans, and programs to support preservation of cultural resources. This includes a General Plan with a Historic Resources section, a Cultural Resources Management Plan (CRMP), a Historic Preservation Ordinance, and a Historic Resources Advisory Committee (HRAC) to oversee and implement the CRMP and Historic Preservation Ordinance.

Cultural Resources Management Plan

The HRAC developed and oversees the implementation of the CRMP. The CRMP requires that project developers prepare a cultural resources plan for, “all historic site or sites which have a potential for the on-site discovery, reconnaissance and identification of cultural resources.” The cultural resources plan must include: a records search completed at the NWIC, the interview of persons knowledgeable about the history of the site, and a review of maps archived at the history

²⁴ “About Certified Local Governments,” *National Park Service*, November 9, 2021, <https://www.nps.gov/subjects/clg/about.htm>, accessed January 28, 2022.

²⁵ “Certified Local Government Program,” *National Park Service*, https://grantsdev.cr.nps.gov/CLG_Review/Get_All_CLG.cfm, accessed January 28, 2022.

²⁶ “About Certified Local Governments.”

room of the Main Library of Redwood City and other historical data contained in the Redwood City Inventory. The cultural resources plan must also include sections on: Redwood City's historic context and the context of the project site, a history of the site's land uses, a description and photographs of all potentially significant historic structures on the site, an analysis of the potential impacts of the projects to the site, and preservation measures which address building preservation needs and methods, archaeological monitoring during ground-disturbing activities associated with the project, and that all resources identified during the project are recorded and any artifacts are donated to the City for public display. The CRMP has standard procedures in the event of the discovery of human remains which require: work to immediately stop, the San Mateo County Coroner to be contacted, and for the NAHC to be contacted, if the human remains are found to be indigenous, to determine the most-likely-descendant (MLD) for tribal consultation. The CRMP also establishes security measures for when cultural resources are identified.

Historic Preservation Ordinance

The purpose of Redwood City's historic preservation ordinance (Chapter 40 of the Redwood City Municipal Code) is to, "provid[e] for the identification, protection, enhancement, perpetuation, and use of improvements, buildings, structures, signs, objects, features, sites, places, and areas within the City that reflect special elements of the City's historic, architectural, cultural, aesthetic, and other heritage." The ordinance establishes the HRAC and outlines its procedures and duties. It also outlines the City's Planning Commission's procedures for historic landmark designation and gives the Planning Commission oversight over Historic Preservation Permit approvals which are needed to demolish, construct, alter, remove, or relocate City-designated historic landmarks or structures within City-designated historic districts.

Redwood City General Plan

The Redwood City General Plan is a comprehensive long-range general plan for the physical development of Redwood City.²⁷ The General Plan includes goals and policies for the physical development of the City, including a section on Historic Resources. Goals and policies related to cultural resources and tribal cultural resources are listed below. These policies were developed to implement the following Guiding Principles: "ensure that change harmonizes with existing development to preserve our historic and neighborhood character" and "preserve and generate awareness of our cultural, educational, economic, recreational diversity, and historic heritage".²⁸

- *Goal BE-36:* Identify, study, and document historic resources.
- *Policy BE-36.1:* Develop a detailed strategy for ongoing survey and identification of historic resources.
- *Policy BE-36.2:* Develop a citywide narrative context for historic resources.

²⁷ The City of Redwood City, City of Redwood City General Plan, October 13, 2010, amended June 11, 2018 and January 27, 2020, <https://www.redwoodcity.org/departments/community-development-department/planning-housing/planning-services/general-plan-precise-plans/general-planv>, accessed January 28, 2022.

²⁸ Ibid, p. BE-211.

- *Policy BE-36-3:* Continue to maintain the Historic Resources Inventory in a digital format that can be easily updated and tracked.
- *Goal BE-37:* Protect, preserve, restore, rehabilitate, and/or enhance historic resources.
- *Policy BE-37.1:* Enhance, restore, preserve, and protect, as appropriate, historic resources throughout the city.
- *Policy BE-37.2:* Preserve historic landmark structures, landscapes (including trees), trails, and sites that serve additional community needs, such as recreational open space and/or cultural needs.
- *Policy BE-37.3:* Encourage the retention and/or adaptive reuse of historic residential, commercial, and industrial buildings.
- *Policy BE-37.4:* Consider relocation of landmark structures to vacant sites within established landmark districts when no other alternative exists for their preservation, or if a particular structure is not protected by ordinance.
- *Policy BE-37.5:* Provide incentives, support, and guidance to the owners of designated historic landmark sites to preserve and rehabilitate structures.
- *Policy BE-37.6:* Allow only compatible, historically appropriate development on vacant parcels within or adjacent to designated historic areas, neighborhoods, and/or sites in compliance with the Secretary of the Interior’s Standards.
- *Policy BE-37.7:* Strive for compatibility with existing historic resources when planning for infrastructure improvements, restorations, new construction, alterations, or similar projects in designated historic districts.
- *Policy 37.8:* Permit removal of non-contributing elements of structures in or adjacent to designated historic resources to allow replacement by compatible, historically appropriate structures.
- *Goal BE-38:* Establish robust programs and activities that educate the public about the history and historic resources of Redwood City
- *Policy BE-38.1:* Encourage public knowledge, understanding, and appreciation of Redwood City’s role in local and regional history.
- *Policy BE-38.2:* Foster civic and neighborhood pride and a sense of identity based on the recognition and use of historical and cultural resources.
- *Policy BE-38.3:* Advocate for the preservation and appropriate rehabilitation of historically significant properties and structures.
- *Policy BE-38.4:* Support and consult with private associations, groups, nonprofit organizations, corporations, school districts, and public agencies with an interest in historic preservation of significant historic resources.
- *Policy BE-38.5:* Continue to offer educational benefits on local history through National Historic Preservation Month activities.
- *Policy BE-38.6:* Develop historical walking programs using historical markers, plaques, and maps for public benefit.

- *Goal BE-39:* Emphasize and showcase the historic resources and unique character of Downtown Redwood City.
- *Policy BE-39.1:* Encourage historical resources and sites to be rehabilitated or reused in historically compatible manner.
- *Policy BE-39.2:* Encourage uses that generate pedestrian activity within the designated Downtown historic commercial districts and landmarks.
- *Policy BE-39.3:* Ensure that infrastructure, streetscape, signage, and other improvements and amenities respect the historic character of Downtown.
- *Policy BE-39.4:* Reestablish public awareness, where appropriate, of the historical significance of Redwood Creek within Downtown.

DTPP

The DTPP, as articulated in the Planning, Housing, and Economic Development Department Downtown Precise Plan (July 15, 2010), is intended to implement a contemporary vision for the City’s approximately 183-acre downtown area by establishing new land use, development, and urban design regulations for a 20-year planning period.²⁹

One of the primary objectives of the DTPP is to establish new land use and development regulations that will produce a unique and robust downtown within the context of a rich, historic, and valued built environment. These regulations would be imposed as “standards” and “guidelines.” Standards would be mandatory development regulations, while guidelines would not be mandatory, but rather would be recommendations that would be used to guide new development. These standards and guidelines would address all aspects of potential development in the amended DTPP area, including: (1) permitted uses of property (land uses); (2) area-wide density of buildings and structures; (3) building heights and disposition (including massing and shadows); (4) architectural character (including facade design and composition); (5) site design and planning (including building placement, parking, and landscaping); (6) signage; (7) public frontages, streets, and streetscapes; and (8) preservation and maintenance of historic resources.³⁰

7.3 Impacts and Mitigation Measures

7.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe cultural and historic resources and tribal cultural resources impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

²⁹ Downtown Precise Plan Draft EIR, p. 2-1.

³⁰ Ibid.

7.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-wide amendments would:

- a) cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; or
- b) cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- c) disturb any human remains, including those interred outside of formal cemeteries; or
- d) cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Significance criteria related to tribal cultural resources was added to CEQA in 2014 with the passage of AB 52 (see Public Resources Code above). Therefore, tribal cultural resources impacts were not previously addressed, and no tribal consultation was completed for the DTPP Final EIR. Tribal Cultural Resources impact analysis, based on the 2014 significance criteria, have been combined with the Cultural Resources section to keep the analysis chapters consistently numbered with the DTPP Final EIR, since this document tiers off of the DTPP Final EIR. Impacts to paleontological resources, which were addressed in the cultural and historic resources section of the DTPP Final EIR, are addressed in section 16, Geology and Soils, of this EIR per the Governor's Office of Planning and Research's revisions to the CEQA Guidelines of 2018. Additionally, impacts to human remains were not specifically addressed in the DTPP Final EIR. Instead, they were part of the analysis for impacts to archaeological resources. Since the CEQA checklist has changed since the DTPP Final EIR, this impact is addressed separately below.

7.3.3 Impacts and Mitigation Measures

Overall impacts to cultural resources with the DTPP Plan-Wide Amendments would be similar compared to the DTPP Final EIR because development allowed by the DTPP Plan-Wide Amendments could result in similar potential impacts to historic resources as the DTPP. Impacts on tribal cultural resources were not analyzed in the DTPP EIR and, therefore, cannot be compared.

Mitigation measure language from the DTPP Final EIR has been revised to add clarification and to improve their applicability and implementation.

Impact CR-1: Implementation of the DTPP Plan-Wide Amendments would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. (*Significant and Unavoidable*)

The DTPP Final EIR found that implementation of the DTPP would result in a *significant impact* to historic resources because future development within the amended DTPP area has the potential to demolish, destroy, or alter historic resources such that the significance of the resource is materially impaired. The DTPP Final EIR identified two historic districts and 47 individual historic resources within the DTPP area, only seven of which were previously identified as “historic resources which may be altered, relocated, or removed.”

The DTPP Plan-Wide Amendments would allow additional development in the amended DTPP area, similar to the DTPP, and would therefore result in a similar impact. As described in the Environmental Setting, there are no known historic resources located within the potential future DTPP boundary extension area that are eligible for the California Register and/or the National Register. However, one structure, the McGarvey House at 649 El Camino Real, is listed on the City’s Historical Resources Inventory. Therefore, development pursuant to the proposed DTPP Plan Amendments could result in a significant effect on this resource. Additionally, development pursuant to the proposed DTPP Plan Amendments could result in adverse effects to one or more resources previously identified in the DTPP Final EIR, and/or potentially to resources yet to be identified, and there are no policies in the existing DTPP or proposed amendments that would explicitly prohibit such effects. Furthermore, implementation of the DTPP Plan-Wide Amendments could result in indirect impacts from construction vibration to existing resources within the amended DTPP area, as well as to one previously identified potential historic resource that is located adjacent to the potential DTPP boundary extension area and outside of the DTPP boundaries (i.e., 701–713 Arguello Street).

Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR) requires that, for proposed development on parcels that contain historic resources, the City make a preliminary determination as to whether any discretionary projects would have a potentially significant adverse effect on historic resources. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR) requires that proposed development adjacent to historic resources requiring discretionary approval be reviewed by an architect or architectural historian and be conditioned to avoid any substantial adverse changes on adjacent historical resources. Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR) imposes conditions of approval on all future projects involving demolition and construction activities in order to reduce ground-borne vibration levels. These three mitigation measures remain applicable to the DTPP Plan-Wide Amendments and have been included here with necessary clarifications to reduce the severity of significant impacts to historic resources. However, even with these mitigation measures in place, the DTPP Plan-Wide Amendments have the potential to result in substantial adverse changes to historic resources, including possible demolition, and potential impacts to historic resources therefore remain *significant and unavoidable*.

Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments): For any discretionary project involving an amended DTPP area that contains a historic resource, including the seven properties which the DTPP

identifies as historic properties which may be altered, relocated or removed, the City shall make a preliminary determination as to whether or not the project may have a potentially significant adverse effect on the historic resource. If the City determines that the project may have a potentially significant effect, the City shall require the applicant to implement, to the extent feasible, the following mitigation measures.

- a) If feasible, the applicant shall, to City satisfaction, ensure that the project adheres to one or both of the following standards:
- Secretary of Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings; or
 - Secretary of Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Weeks and Grimmer, 1995).

The project shall be reviewed by a qualified architect or architectural historian approved by the City and meeting the Secretary of the Interior’s Professional Qualifications Standards published in the Code of Federal Regulations (36 CFR part 61), who shall make a recommendation to the City’s Historic Resources Advisory Committee as to whether the project fully adheres to the Secretary Standards for Rehabilitation, as well as to whether any specific modifications are necessary to do so. The final determination as to a project’s adherence to the Standards for Rehabilitation shall be made by the Historic Resources Advisory Commission or the body with final decision-making authority over the project.

- b) If measure (a) is not feasible, and if relocation of the historic resource is a feasible alternative to demolition, the historic resource shall be moved to a new location compatible with the original character and use of the historical resource, and its historic features and compatibility in orientation, setting, and general environment shall be retained, such that the resource retains its eligibility for listing on the California Register.

If neither measure (a) nor measure (b) is feasible, the City shall, as applicable and to the extent feasible, implement the following measures in the following order:

- c) Document the historic resource before any changes that would cause a loss of integrity and loss of continued eligibility. The documentation shall adhere to the Secretary of the Interior’s Standards for Architectural and Engineering Documentation. The level of documentation shall be proportionate with the level of significance of the resource. The documentation shall be made available for inclusion in the Historic American Building Survey (HABS) or the Historic American Engineering Record (HAER) Collections in the Library of Congress, the California Historical Resources Information System and the Bancroft Library, as well as local libraries and historical societies, such as the Redwood City Public Library.
- d) Retain and reuse the historic resource to the maximum feasible extent and continue to apply the Standards for Rehabilitation to the maximum feasible extent in all alterations, additions and new construction.
- e) Through careful methods of planned deconstruction to avoid damage and loss, salvage character-defining features and materials for educational and interpretive use

on-site, or for reuse in new construction on the site in a way that commemorates their original use and significance.

- f) Interpret the historical significance of the resource through a permanent exhibit or program in a publicly accessible location on the site or elsewhere within the DPP area.

Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments): The Project Applicant for each subsequent development project that requires a discretionary approval and that is adjacent to a historic resource shall engage a qualified architect or architectural historian approved by the City and meeting the Secretary of the Interior’s Professional Qualifications Standards (36 CFR part 61) and by the City’s Historic Resources Advisory Committee to review the proposed development for its potential impacts on the adjacent historic resource. Any site and architectural design modifications identified through this review process as necessary to avoid a “substantial adverse change” in the significance of the adjacent historic resource and protect its continued eligibility for listing on the California Register, as determined by the City, shall be required of the Project Applicant as conditions of project approval.

Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments): The City shall reduce ground-borne vibration levels that may be generated by future site-specific demolition and construction activities by imposing conditions of approval on all future projects involving demolition and construction activities, which conditions shall require the Project Applicant to ensure the following ground-borne vibration abatement measures are implemented by the construction contractor:

- Restrict vibration-generating activity to between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, except when authorized by the Building Official (Redwood City Municipal Code Section 24.32).
- Notify occupants of land uses located within 200 feet of pile-driving activities of the project construction schedule in writing.
- Investigate in consultation with City staff possible pre-drilling of pile holes as a means of minimizing the number of percussions required to seat the pile.
- Conduct a pre-construction site survey documenting the condition of any historic structure located within 200 feet of pile driving activities.
- Monitor pile driving vibration levels to ensure vibration does not exceed appropriate thresholds for the building (5 mm/sec [0.20 inches/sec]) peak particle velocity (ppv) for structurally sound buildings and 2 mm/sec (0.08 inches/sec) ppv for historic buildings.

Significance after Mitigation: Significant and unavoidable. (Newly unavoidable significant impact, compared to DTPP Final EIR, with respect to with respect to Properties that Contain Historic Resources; No new significant impact, compared to DTPP Final EIR, Properties Adjacent to Historic Resources, in that it cannot be stated with certainty that adjacent new construction could have no significant impacts on adjacent historic resources) The above mitigation measures are expected to mitigate the

potential adverse impacts to historic resources from implementation of the DTPP Plan-Wide Amendments to the maximum extent feasible. However, given the uncertainty with respect to the condition of and circumstances surrounding the historic resources at the time future development projects are proposed that would affect such resources, and without knowing the specific design characteristics of such future development proposals, the City cannot determine with certainty that these measures would reduce the DTPP Plan Wide Amendment's potential impacts on historic resources to a less-than-significant level. Consequently, this impact may remain significant and unavoidable.

Impact CR-2: Implementation of the DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that the DTPP represents a *potentially significant impact* to archaeological resources because there is a high potential for new development facilitated by the DTPP to disturb unrecorded archaeological resources. Implementation of the DTPP Plan-Wide Amendments would not change this conclusion because the proposed DTPP Plan-Wide Amendments would also allow for additional development, resulting in a similar potential impact as the DTPP. DTPP Final EIR Mitigation Measure 7-1 establishes protocol to identify, evaluate, and treat any archaeological resources in the event archaeological resources are encountered during ground-disturbing activities. The CRMP also requires that a cultural resources plan be prepared as a standard condition of project approval for all development projects in the amended DTPP area.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments), and the City's CRMP requirement, are sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments): Implementation of the following mitigation measures would reduce the potential impacts of new development facilitated by the DTPP Plan-Wide Amendments on undiscovered archeological resources to a *less-than-significant level*:

- a) In the event that any deposit of prehistoric or historic archaeological materials is encountered during project construction activities, the construction contract shall ensure that all work within an appropriate buffer area around the discovery, but not less than 50 feet, shall be stopped and a qualified archaeologist meeting federal criteria under 36 CFR 61 shall be contacted to assess the find(s) and make recommendations. The project applicant(s) shall consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resource, beyond those that are scientifically important, are considered.

In the event prehistoric or historic archaeological materials cannot be avoided by project activities, the City Community Development and Transportation

Department shall confirm that the project applicant has retained a qualified archaeologist to evaluate the potential historic significance of the find(s). All archaeological material unearthed by project construction activities shall be evaluated by the qualified archaeologist. If the find(s) are determined to not be a historical resource pursuant to CEQA Guidelines Section 15064.5(a) or a unique archaeological resources pursuant to Public Resources Code Section 21083.2(g) by a qualified archaeologist, and was not identified as a tribal cultural resource by a Native American representative, avoidance is not necessary. If the find(s) are determined by the qualified archaeologist to be a historical resource or a unique archaeological resource, the resources shall be avoided if feasible. If the City determines that avoidance is not feasible, project impacts shall be mitigated in accordance with the recommendations of the qualified archaeologist, in coordination with the City Community Development and Transportation Department, the project applicant, and in accordance with CEQA Guidelines Section 15126.4 (b)(3)(C), which requires the preparation and implementation of a data recovery plan.

The data recovery plan shall include provisions for adequately recovering all scientifically consequential information from and about any discovered archaeological materials and include recommendations for the treatment of these resources. In-place preservation of the archaeological resource is the preferred manner of mitigating potential impacts, as it maintains the relationship between the resource and the archaeological context. In-place preservation also reduces the potential for conflicts with the religious or cultural values of groups associated with the resource. Other mitigation options include, but are not limited to, the full or partial removal and curation of the resource.

The City Community Development and Transportation Department shall confirm that the project applicant(s) have retained a qualified archaeologist for the preparation and implementation of the data recovery plan, which shall be conducted prior to any additional earth-moving activities in the area of the resource. The recovery plan shall be submitted to the project applicant, the City Community Development and Transportation Department. Once the recovery plan is reviewed and approved by the City Community Development and Transportation Department and any appropriate resource recovery completed, project construction activity within the area of the find may resume. A data recovery plan shall not be required for resources that have been deemed by the qualified archaeologist, in coordination with the City, as adequately recorded and recovered by studies already completed as per CEQA Guidelines Section 15126.4 (b)(3)(D). The qualified archaeologist shall determine the need for archaeological construction monitoring in the vicinity of the find thereafter.

- b) Prior to the issuance of grading permits within the amended DTPP area, the City Community Development and Transportation Department shall confirm that any development applicant has required all construction crews to undergo training for the identified of federal or state-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological resources within the amended DTPP area, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work. All future individual development projects proposed in the amended DTPP area will be subject to applicable CEQA review and evaluation requirements, and to the extent that such

projects are found to have the potential to disturb or destroy archaeological resources, appropriate mitigation measures would be required to address any identified significant impacts.

Significance After Mitigation: Less than Significant. (No new significant impact, compared to DTPP Final EIR)

Impact CR-3: Implementation of the DTPP Plan-Wide Amendments would not disturb any human remains, including those interred outside of formal cemeteries. (*Less than Significant*)

Through a records search and background research, no human remains are known to exist in the amended DTPP area. Therefore, the proposed DTPP Plan-Wide Amendments are not anticipated to impact human remains, including those interred outside of formal cemeteries. While unlikely, if any previously unknown human remains were encountered during ground disturbing activities facilitated by the DTPP Plan-Wide Amendments, any impacts to the human remains could be potentially significant. However, any potentially significant impact would be reduced to a less-than-significant level with implementation of PRC Section 5097.98 and Health and Safety Code Section 7050.5. This requires that if human remains are identified, the County Coroner will be contacted and who will determine if the human remains are historical, prehistoric, or a crime scene. If the coroner determines the remains are Native American, the coroner will contact the NAHC. As provided in PRC Section 5097.98, the NAHC will identify the person or persons believed most likely to be descended from the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98.

The DTPP Final EIR did not specifically address impacts associated with human remains, including those interred outside of formal cemeteries. The DTPP Plan-Wide Amendments would not result in new or more severe impacts than identified in the Final EIR because the requirements of PRC Section 5097.98 and Health and Safety Code Section 7050.5 are sufficient to reduce this impact to a *less-than-significant* level.

Impact CR-4: Implementation of the DTPP Plan-Wide Amendments would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe. (*Less than Significant with Mitigation*)

As described above in the *Environmental Setting*, there are no pre-contact resources known in the amended DTPP area, although there is a pre-contact resource within 550 feet of the DTPP area and 3,850 feet from the potential future DTPP boundary extension area. Additionally, there may be previously unknown buried archaeological resources and/or tribal cultural resources that have

not been recorded. The NAHC SLF search did not identify sacred lands within the amended DTPP area.

While the City is largely a built-up urban environment, implementation of the DTPP Plan-Wide Amendments would result in gradual physical changes within this portion of the City, including an increase of development with a focus on increasing the office and residential development. While these changes would be distributed across the amended DTPP area, they would involve ground disturbance and could lead to the demolition of previously unidentified pre-contact archaeological resources that could also be considered tribal cultural resources. Additionally, infrastructure or other public works improvements could result in damage to or demolition of these kinds of resources.

As detailed in the *Regulatory Setting* above, there are federal, state, and local regulations in place to protect tribal cultural resources, including archaeological resources and human remains. CEQA requires lead agencies to determine, prior to approval, if a project would have a significant adverse effect on historical resources, tribal cultural resources, or unique archaeological resources and requires the lead agency to make provisions for the inadvertent discovery of historical or unique archaeological resources during construction, including tribal cultural resources.

As described previously in this section, SB 18 requires local governments to consult with tribes prior to making certain planning decisions and provides California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to cultural places. In accordance with the requirements of SB 18, City staff sent tribal outreach letters to the ten Native American representatives from eight tribes that were identified by the NAHC to consult on the DTPP Plan-Wide Amendments. No responses were received within 90 days of receipt of the consultation letters, and no responses have been received as of July 27, 2022.

Locally, the City's Historic Preservation Ordinance established a historic landmark designation governing body, the HRAC, criteria for designation, and regulations for modifications to designated landmarks. In addition, the CRMP requires that developers prepare a cultural resources plan, conduct a records search at the NWIC, conduct ethnographic research with people who may be knowledgeable about the site, map research, and methods to address potential impacts to cultural resources from the project. Additionally, Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 of the DTPP Final EIR with clarifying amendments) establishes a protocol in the event of inadvertent discovery of cultural resources during project construction. Also, revisions to the Public Resources Code and the Government Code by AB 52 and AB 168 require local governments to consult with tribes during the review process for CEQA and for housing development projects that would otherwise be exempt from CEQA under changes made to the Government Code by SB 35.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts on tribal cultural resources than the impacts identified in the DTPP Final EIR. Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR with clarifying amendments), in conjunction with the policies, laws, and procedures established by the City and the State of

California, are sufficient to reduce this impact to a *less-than-significant* level because the combination of the mitigation measure, the CRMP, and existing laws establishes sufficient protocol to identify, evaluate, and treat any tribal cultural resources which may be impacted by ground-disturbing projects in the amended DTPP area.

Mitigation: Implement Mitigation Measure CR-3.

Significance After Mitigation: Less than Significant. (No new significant impact, compared to DTPP Final EIR)

7.4 References

- “About Certified Local Governments,” *National Park Service*, November 9, 2021, <https://www.nps.gov/subjects/clg/about.htm>, accessed January 28, 2022.
- “Certified Local Government Program,” *National Park Service*, https://grantsdev.cr.nps.gov/CLG_Review/Get_All_CLG.cfm, accessed January 28, 2022.
- The City of Redwood City, *Draft Environmental Impact Report for the Redwood City Downtown Precise Plan*, State Clearinghouse No. 2006052027, August 2010.
- The City of Redwood City, *City of Redwood City General Plan*, October 13, 2010, amended June 11, 2018 and January 27, 2020, <https://www.redwoodcity.org/departments/community-development-department/planning-housing/planning-services/general-plan-precise-plans/general-planv>, accessed January 28, 2022.
- Levy, Richard, “Costanoan,” In *California*, edited by Robert F. Heizer, pp. 485-495, Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C., 1978.
- Milliken, Randall, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769-1810*, Ballena Press, Menlo Park, CA, 1995.
- Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson, “Punctuated Cultural Change in the San Francisco Bay Area,” In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 99-124, AltaMira Press, Lanham, MD, 2007.
- “Timeline,” *Redwood City History*, <http://www.redwoodcityhistory.org/timeline>, accessed January 31, 2022.

This page intentionally left blank

CHAPTER 8

Public Services and Recreation

This SEIR chapter analyzes the effects of the changes to public services and recreation proposed as part of the DTPP Plan-Wide Amendments, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Topics related to public services and recreation were addressed in the Public Services chapter of the 2010 DTPP Final EIR. The DTPP Final EIR determined that impacts of the DTPP related to police service, fire and emergency medical service, parks and recreation, and schools would be less than significant. Regarding police service and fire and emergency medical service, an increase in calls for service as a result of the DTPP was found to require expanded police patrols and potentially a new police substation, and additional fire and emergency medical service personnel and equipment in the future to maintain acceptable service ratios and response times. However, since specific needs in terms of size, staffing, equipment, and location were unknown, associated impacts were deemed speculative, and as a result, it was concluded impacts on police and fire and emergency medical service were less than significant and no mitigation was required.

The DTPP proposed several public space and streetscape improvements, including a public park (in conjunction with the Redwood City School District), the construction of which were found to result in less than significant environmental impacts. Future development under the DTPP was described to also be subject to Parks, Recreation, and Community Services Department Strategic Plan policies and applicable parkland dedication or in-lieu fee requirements, and new parkland could be provided inside or outside of the DTPP area in the future. However, similar to police and fire services, specific parks and recreational facilities expansion needs under the DTPP were unknown and associated impacts were deemed speculative, and as a result, impacts on parks and recreational facilities were found to be less than significant. Although development under the DTPP would increase density and population in the amended DTPP area resulting in additional school-aged children, it was determined that the payment of required school impacts fees would address the DTPP impact on school services, and as a result, impacts of the DTPP on public schools were determined to be less than significant and no mitigation was required.¹

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

Analysis of DTPP impacts related to solid waste were included in Public Services chapter of the DTPP Final EIR. See Chapter 10, *Utilities and Infrastructure*, of this SEIR for the discussion of solid waste. The Public Services chapter of the DTPP Final EIR also included analysis of impacts related to impairment or interference with an adopted emergency response plan or emergency evacuation plan. This topic is discussed in Chapter 14, *Hazards and Hazardous Materials*, of this SEIR.

8.1 Environmental Setting

8.1.1 Police Service

Redwood City Police Department

The Redwood City Police Department (RCPD) provides police services in the City including responding to emergency and non-emergency calls for service. The RCPD is comprised of a Patrol Division, an Investigations Division, and an Administrative Division. RCPD Headquarters is located at 1301 Maple Street, in the Bair Island neighborhood of the City, north of US Highway 101. A RCPD Substation is located Downtown within the DTPP area at 2223 Broadway, within the larger Fox Theater building.

The RCPD Patrol Division also contains the Downtown Services Unit, created in 2016 as a policing adaptation designed to effectively address public safety needs in the Downtown core area. The Downtown Services Unit utilizes various modalities of patrol, including traditional foot patrols, bicycle patrols, and vehicle patrols. Downtown Services Unit members proactively interact with Downtown business owners and operators, as well as patrons and residents in order to maintain collaborative relationships that support the Downtown community.²

RCPD staffing included 121 full-time equivalent employees in 2021, including sworn and non-sworn personnel.³ As of January 2022, there were 83 sworn officers.⁴ There are 96 sworn officers budgeted with nine of those positions frozen by the City and unable to be filled. These staffing levels allow for what RCPD considers minimal, basic service levels, and patrol coverage is supplemented by overtime officers on almost every shift, every day.

RCPD has a response time service goal of 5 minutes for emergency calls. As of January 2022, RCPD is generally meeting City standards, with the first officer arriving on scene within 5 minutes. However, many of the most serious calls or potentially serious calls require a multi-unit response before officers can safely start to handle the call, so the first officer may arrive on the scene of a call within 5 minutes, but the second officer may not arrive for another 5 or

² Redwood City, 2022a. Downtown Services Unit. Available online: <https://www.redwoodcity.org/departments/police-department/police-divisions/patrol-division/downtown-services-unit>, accessed March 18, 2022.

³ Redwood City, 2021a. Annual Comprehensive Financial Report Fiscal Year Ended June 30, 2021. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/24498/637775977622530000>, accessed March 18, 2022.

⁴ Eight of these officers are unavailable due to long-term injury leave or long-term disability.

6 minutes so that actual action can be taken.⁵ Redwood City is also participating in San Mateo County’s two-year Community Wellness and Crisis Response Pilot Project that looks to deescalate 911 calls and provide care for those undergoing a mental health crisis. Emergency dispatchers deploy mental health clinicians along with police officers to calls regarding individuals suspected of experiencing mental or behavioral health crises.⁶

Ongoing maintenance and upgrades to RCPD Headquarters building’s roof, locker rooms, and the painting of its exterior walls and fence is included in the most recent Five-Year Capital Improvement Program covering Fiscal Year (FY) 2021-22 through FY 2025-26.⁷

San Mateo County Sheriff’s Office

The San Mateo County Sheriff’s Office, which is located at 400 County Center, is also within the amended DTPP area. The San Mateo County Sheriff’s Office Transit Police Bureau is the contracted law enforcement provider on behalf of the San Mateo County Transit District (SamTrans) and the Peninsula Corridor Joint Powers Board (Caltrain). The bureau, which includes approximately 16 officers, is responsible for policing all SamTrans buses, kiosks, vehicles and facilities, as well as all Caltrain rail equipment, stations, rights-of-way and facilities throughout San Francisco, San Mateo and Santa Clara counties. The Transit Police is also responsible for the investigation of crimes, collisions, accidents and deaths involving SamTrans buses and Caltrain passenger trains.⁸

8.1.2 Fire and Emergency Medical Service

The Redwood City Fire Department (RCFD) is responsible for fire prevention and suppression, emergency medical response, and property protection within the City. There are five RCFD fire stations (Stations 9, 10, 11, 12, and 20) in the City. The RCFD is headquartered at 755 Marshall Street (Station 9), which is located within the DTPP area. Station 9 houses the RCFD’s Administrative Staff and Fire Prevention Bureau on the third floor. The first and second floors house the Suppression Crews: Engine 9, Truck 9, Reserve Truck 109, Breathing Support 9, and Battalion 3. Station 9 also houses the City’s Alternate Emergency Operations Center and the County’s Alternate Fire Dispatch Center. The next two closest fire stations to the amended DTPP area are Station 10 (2190 Jefferson Avenue) and Station 11 (1091 Second Avenue).⁹ RCFD works on a daily basis with American Medical Response, a company providing paramedic

⁵ Redwood City Police Department (RCPD), 2022. RE: Request for Information - Police Services (Downtown Planning Environmental Impact Reports), Joshua Chilton, Administrative Lieutenant, March 18, 2022.

⁶ Climate Online, 2021. Program partnering mental health clinicians with cops on certain 911 calls starts Monday, December 2, 2021. Available: <https://climaterwc.com/2021/12/02/program-partnering-mental-health-clinicians-with-police-officers-on-certain-911-calls-starts-monday/>, accessed April 6, 2022.

⁷ Redwood City, 2021b. Five-Year Capital Improvement Program FY 2021-22 Through FY 2025-26. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23900/637649954106170000>, accessed March 18, 2021.

⁸ San Mateo County Sheriff, 2022. San Mateo County Sheriff’s Office Transit Police Bureau. Available online: <https://www.smsheriff.com/patrol-services/transit-police-bureau>, accessed January 31, 2022.

⁹ Redwood City Fire Department (RCFD), 2022a. Fire Stations. Available online: <https://www.redwoodcity.org/departments/fire-department/about-the-department/fire-stations>, accessed March 18, 2022.

ambulance service under a joint powers agreement. All fire units are equipped with advanced life support equipment and a paramedic.¹⁰

As of April 2022, RCFD staffing included 58 full-time employees, including 41 firefighters and 18 Fire Captains.¹¹ The RCFD has a minimum daily staffing requirement of 20 on-duty staff per day, which allows them to reach their goal of responding to calls for service within five minutes at least 85 percent of the time.¹² RCFD has indicated that current staffing levels are not meeting the RCFD standards. The City has agreed to hire an additional 3 full-time employees from the City budget on a 2-year pilot program. Additionally, RCFD is pursuing a SAFER grant to hire an additional 6 firefighters to more adequately staff the Department.¹³

RCFD handled approximately 11,800 emergency response calls in 2021.¹⁴ The average response time for RCFD for the Fiscal year 2020-21 was 5 minutes and 53 seconds. RCFD's response target time is 5 minutes, but the County's industry standard response time is 6 minutes and 59 seconds.¹⁵

Two fire station-related projects are included in the most recent Five-Year Capital Improvement Program covering FY 2021-22 through FY 2025-26: replacement of Station 12 to improve response capabilities for RCFD's oldest facility (budgeted for FY 2022-23 to 2024-25) and updating and expanding Station 9 to meet staffing needs (budgeted for FY 2022-23 to FY 2023-24).¹⁶

8.1.3 Parks and Recreation

Redwood City Parks, Recreation and Community Services Department

The Redwood City Parks, Recreation and Community Services Department manages parks and recreation facilities in the City, and is divided into two main divisions, consisting of the Parks and Facilities division and the Recreation and Community Services division.

Redwood City has approximately 230 total acres of active parkland across 52 parks. Active parkland is defined as land owned by Redwood City or another public agency, located within City limits and having active recreational value. The City owns and maintains 38 parks totaling approximately 186 acres. The remaining 14 parks and approximately 44 acres are "school parks," which include sports fields and play areas. The sports fields at school parks host sports leagues

¹⁰ Redwood City, 2010. A New General Plan for Redwood City, Draft Environmental Impact Report, May 2010

¹¹ RCFD, 2022b. RCFD Response to Information Request, Gina Hamilton, Management Analyst, April 4, 2022.

¹² Redwood City, 2010. A New General Plan for Redwood City, Draft Environmental Impact Report, May 2010

¹³ RCFD, 2022b. RCFD Response to Information Request, Gina Hamilton, Management Analyst, April 4, 2022.

¹⁴ Redwood City, 2021a. Annual Comprehensive Financial Report Fiscal Year Ended June 30, 2021. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/24498/637775977622530000>, accessed March 18, 2022.

¹⁵ RCFD, 2022b. RCFD Response to Information Request, Gina Hamilton, Management Analyst, April 4, 2022.

¹⁶ Redwood City, 2021b. Five-Year Capital Improvement Program FY 2021-22 Through FY 2025-26. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23900/637649954106170000>, accessed March 18, 2021.

and recreational activities year-round in the afternoons, evenings, weekends and everyday over the summer vacation. However, school parks are not permanently dedicated to the public for recreational use and current public access is supported by joint use agreements.

The City classifies its parks as one of six park types, which allow the City to identify active recreation facilities and apply standards consistently across the system¹⁷:

Mini Park. Small, single-purpose improved area generally equipped for use by small children. Usually less than one acre.

Neighborhood Park. Combined playground and park area generally for non-organized activities. May include a restroom.

Community Park. Designed for organized activity with users traveling from some distance. Includes parking, sports fields and restrooms.

Special Use Park. Specialized use recreational areas that do not fit another category, such as dog parks and skate parks.

School Park. School-owned facilities with limited availability. Typically, only active sport and recreational use areas contribute to school park acreage.

Open Space. Undeveloped, publicly-owned areas for rest, relaxation and contemplation.

The Redwood City Parks, Recreation and Community Services Department has divided the City's service area into seven recreational planning areas. The Downtown Recreational Planning Area, which includes the majority of the DTPP, contains seven parks totaling approximately 3.46 acres, as shown in **Table 8-1** and illustrated in **Figure 8-1**.^{18,19} The DTPP itself contains four parks, totaling approximately 1.52 acres: Little River Park (now anticipated to be removed although replacement open space would be incorporated into a proposed Gatekeeper project, if approved), Roselli Garden, Courthouse Square, and City Center Plaza.²⁰ Other City-owned open spaces in the DTPP include Theater Way, City Hall courtyard, Library Plaza, Depot Plaza, Broadway/Spring Parklet, Broadway/Arguello Parklet; Arguello Plaza (anticipated to be removed) and Spring/Marshall Parklet (anticipated to be removed).

The City has 10 sports fields for soccer, softball, baseball and flag football, although none are located within the amended DTPP area. These include major facilities such as The Red Morton Community Park, Hoover Park, Sandpiper Field, and Marlin Park. The closest athletic field to the proposed DTPP is the baseball diamond, soccer field, and basketball court at Hoover Park located

¹⁷ Redwood City, 2019. Parks, Recreation & Community Services Parks and Facilities Needs Assessment, March 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23148/637493466088030000>, accessed March 18, 2022.

¹⁸ While the southern portions of the DTPP area are located within the North Redwood City and Middle Redwood City Recreational Planning Areas, there are no additional park resources within these portions and the assumed potential future DTPP northerly extension boundary is located within the Downtown Recreational Planning Area. Thus, the table provided focuses on the Downtown Recreational Planning Area.

¹⁹ Little River Park, although included in this discussion, is on property owned by Caltrain and maintained by the City.

²⁰ Redwood City, 2019. Parks, Recreation & Community Services Parks and Facilities Needs Assessment, March 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23148/637493466088030000>, accessed March 18, 2022.

approximately 0.47 mile to the east of the eastern boundary of the amended DTPP area (along Maple Street). There is also a baseball diamond and soccer field at Hawes Park located approximately 0.5 mile south of the southern boundary of the amended DTPP area. Mezes Park, which lies within the Downtown Recreational Planning Area, does contain tennis courts, a half basketball court, and a handball court and is located approximately 0.1 mile north of the proposed DTPP extension. Although not located within the amended DTPP area, Sequoia High School is adjacent to the amended DTPP area and contains football, soccer, and baseball fields.

**TABLE 8-1
PARKS WITHIN THE DOWNTOWN RECREATIONAL PLANNING AREA**

Park Name	Park Classification	Acreage
City-owned Parks		
Mezes Park	Neighborhood Park	1.39
Little River Park	Mini Park	0.08
John S. Roselli Memorial Garden	Mini Park	0.64
Jardin de Niños Park	Mini Park	0.41
Courthouse Square	Special Use Park	0.65
City Center Plaza	Special Use Park	0.15
Main Street Dog Park	Special Use Park	0.14
	Total	3.46
Parks Managed by other Agencies		
Redwood High School	School Park	0.49

SOURCE: Redwood City, 2019.

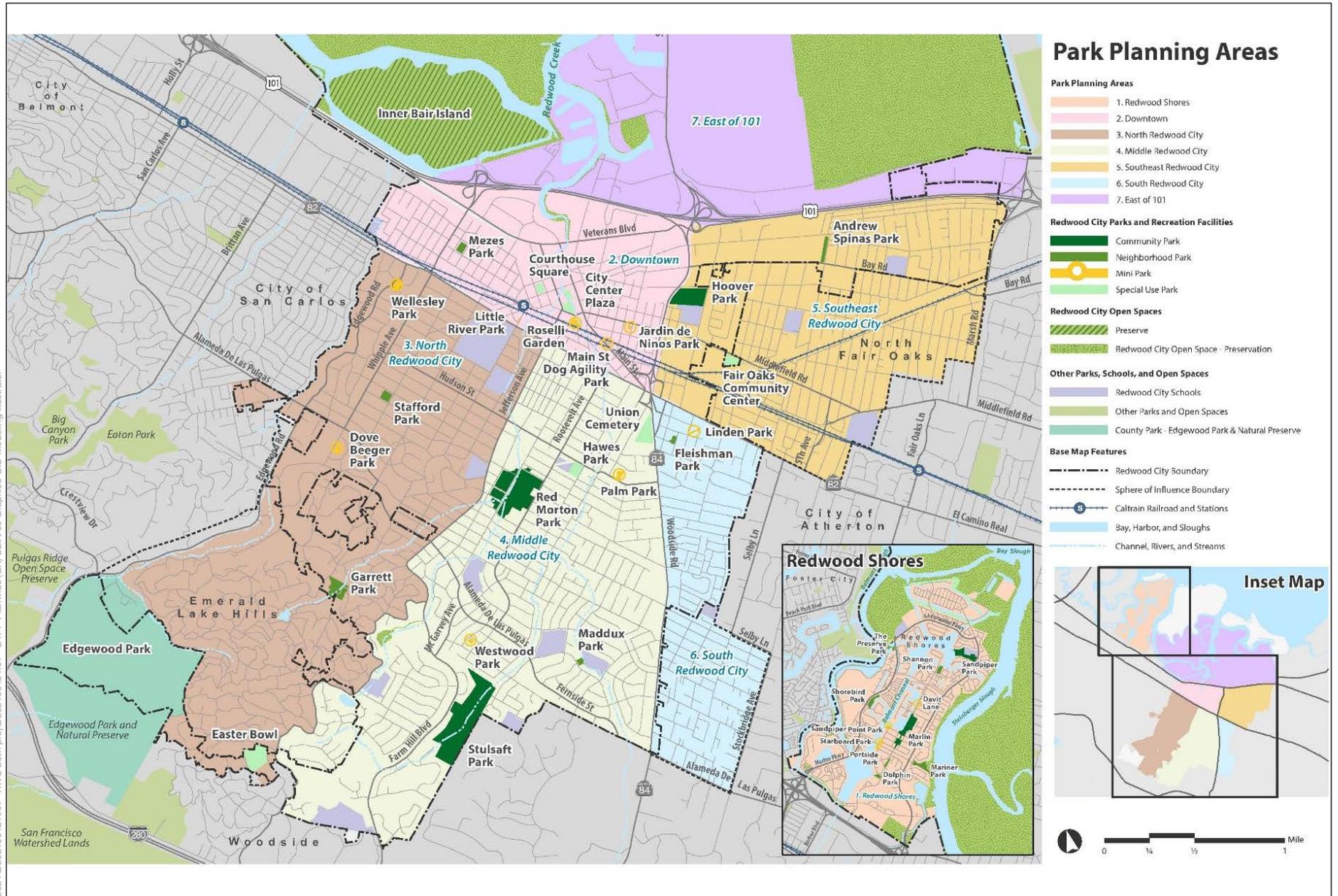
The City also operates 5 community centers that host a variety of programs, services, classes, meetings, and events. These include the Red Morton Community Center, the Veterans Memorial Senior Center, the Community Activities Building, the Sandpiper Community Center, and the Fair Oaks Community Center.²¹ The closest community center to the DTPP is the Red Morton Community Center located approximately 0.6 mile to the south of the southern border.

Regional Recreational Resources

Bair Island, in northern Redwood City, is part of the Don Edwards San Francisco Bay National Wildlife Refuge managed by the U.S. Fish and Wildlife Service. Inner Bair Island, a salt marsh that is being restored, contains two trails and wildlife viewing platforms. The 1.7-mile hike to the Middle Bair Island observation deck and the 0.3-mile hike to the Inner Island observation deck are one-way trails that comprise a segment of the San Francisco Bay Trail, providing hiking bicycling opportunities.²²

²¹ Redwood City, 2022b. Facilities. Available online: <https://www.redwoodcity.org/departments/parks-recreation-and-community-services/facilities>, accessed March 18, 2022.

²² Peninsula Open Space Trust (POST), 2022. Bair Island. Available online: <https://openspacetrust.org/hike/bair-island/>, accessed March 18, 2022.



2021\1D202100421_XX - RWC both proj\1D202100421_01 - DTPP Planwide (GK) SEIR\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Redwood City, 2020

DTPP Plan-Wide Amendments SEIR

Figure 8-1
Redwood City Recreational Planning Areas

Edgewood Park and Natural Preserve, located in southwestern Redwood City, is managed by the San Mateo County Parks Department. The serpentine grasslands of Edgewood Park and Natural Preserve are known for their displays of wildflowers each spring. The park's approximately 467 acres of woodlands and grasslands contain trails offering opportunities for hiking, trail running, and horseback riding. There are also several drop-in picnic sites and restrooms.²³

8.1.4 Schools

Redwood City School District

The Redwood City School District (RCSD) is a Pre-K-8th grade district serving approximately 6,700 students in Redwood City and portions of Atherton, Menlo Park, San Carlos, and Woodside. RCSD 8th graders feed into the Sequoia Union High School District (SUHSD) (see below). The DTPP is located within the attendance boundary for Clifford School that includes transitional kindergarten through the 8th grade (RCSD, 2022). All RCSD school facilities had a capacity of 8,300 as of 2018.²⁴ Total RCSD student enrollment was approximately 8,086 in school year 2020/2021, meaning that enrollment did not exceed facilities capacity. Student enrollment at Clifford School was 608 in school year 2020/2021, which was an increase from the previous three school years, but lower than enrollment in school year 2014/2015 of 727.²⁵

As authorized by California Government Code Sections 65995 and 65996, RCSD collects school impact fees from developers of new residential building space. The impact fee revenue is used together with other RCSD funds (e.g., State grants, general obligation bonds) to complete capital improvements. The amount of the current fee was established through RCSD's Developer Fee Justification Study.²⁶

Sequoia Union High School District

The Sequoia Union High School District (SUHSD) provides education to students in grades 9 through 12 residing in the southern San Mateo County communities of Atherton, Belmont, East Palo Alto, Ladera, San Carlos, Menlo Park, Portola Valley, Redwood City, and Woodside. The DTPP lies within the attendance boundary for Sequoia High School within the SUHSD. Collectively, the SUHSD's school facilities in have a capacity of approximately 10,062 students (SUHSD, 2018). Student enrollment was 10,327 in school year 2020/2021, meaning that student enrollment exceeded facilities capacity in school year 2020/2021. Student enrollment has generally been increasing in the SUHSD since school year 2014/2015. Student enrollment for

²³ San Mateo County Parks Department, 2022. Edgewood Park & Natural Preserve. Available online: <https://parks.smcgov.org/edgewood-park-natural-preserve>, accessed March 18, 2022.

²⁴ Redwood City School District (RCSD), 2018. Review of Fee Justification Documentation, September 13, 2018. Prepared by Schoolhouse Services. Accessed March 18, 2022.

²⁵ California Department of Education (CDE), 2022. DataQuest, Enrollment Multi-Year Summary by Grade. Available online: <https://www.cde.ca.gov/ds/ad/dataquest.asp>, accessed March 18, 2022.

²⁶ Redwood City School District (RCSD), 2018. Review of Fee Justification Documentation, September 13, 2018. Prepared by Schoolhouse Services. Accessed March 18, 2022.

Sequoia High School was 2,019 in school year 2020/2021. Enrollment has been decreasing at Sequoia High School since school year 2016/2017 when student enrollment was 2,182.²⁷

As authorized by California Government Code Sections 65995 and 65996, SUHSD collects school impact fees from developers of new residential and non-residential building space. The impact fee revenue is used together with other SUHSD funds (e.g., State grants, general obligation bonds) to complete capital improvements. The amount of the current fee was established through SUHSD's Developer Fee Study.²⁸

8.1.5 Libraries

The Redwood City Public Library (RCPL) Department operates the Redwood City Downtown Library (1044 Middlefield Road), the Redwood Shores Branch Library (399 Marine Parkway), and the Schaberg Branch Library (2140 Euclid Avenue) within the City. The RCPL provides book and other media lending, online resources, literacy programs, support for school-age children, access to technology, and other community programming.²⁹ In 2021, the Institute of Museum and Library Services announced RCPL as one of 30 finalists for the 2021 National Medal for Museum and Library Service. The National Medal is the nation's highest honor given to museums and libraries that demonstrate excellence in service to their communities.³⁰

The population of Redwood City, particularly in the downtown area, has increased since the Downtown Library was built. Various modifications have been made to sections of the building to better address customer needs, but there is limited flexibility remaining in the existing space. The Downtown Library does not need additional space for library materials, as careful maintenance of the existing collection and the addition of eBooks and other online resources has provided some improvement, but existing spaces are needed for RCPL patrons. Event and activity spaces, seating, and community meeting rooms are all inadequate to meet current demand. A study to identify needs and opportunities for expansion of the current Downtown Library facility in FY 2022-23 is included in the most recent Five-Year Capital Improvement Program covering Fiscal Year (FY) 2021-22 through FY 2025-26.³¹

²⁷ California Department of Education (CDE), 2022. DataQuest, Enrollment Multi-Year Summary by Grade. Available online: <https://www.cde.ca.gov/ds/ad/dataquest.asp>, accessed March 18, 2022.

²⁸ Sequoia Union High School District (SUHSD), 2018. Level I Developer Fee Study for Sequoia Union High School District, March 1, 2018. Prepared by Jack Schreder & Associates, Inc. Available online: https://www.seq.org/documents/Departments/Construction/constructionfix/SUHSD%20Level%20I%20Developer%20Fee%20Study%2003_01_18.pdf, accessed March 18, 2022.

²⁹ Redwood City Public Library (RCPL), 2022. RCPL Limited Edition. Available online: <https://www.redwoodcity.org/departments/library/rcpl-limited-edition>, accessed March 18, 2022.

³⁰ Institute of Museum and Library Services (IMLS), 2021. 2021 National Medal for Museum and Library Service. Available online: <https://www.imls.gov/our-work/national-medal-museum-and-library-service/2021-national-medal-museum-and-library-service>, accessed March 18, 2022.

³¹ Redwood City, 2021b. Five-Year Capital Improvement Program FY 2021-22 Through FY 2025-26. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23900/637649954106170000>, accessed March 18, 2021.

8.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the 2010 DTPP EIR. DTPP EIR Chapter 8, *Public Services*, Section 8.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.

8.2.1 Parks and Facilities Needs Assessment

The 2019 Parks and Facilities Needs Assessment has superseded the 2008 Parks and Facilities Needs Assessment included in the DTPP Final EIR. The goal of the 2019 Parks and Recreation Facilities Needs Assessment was to evaluate the community's current and future needs with regards to parks and recreation services, and aimed to identify highly used services, service gaps and underserved areas, prioritize potential improvements, and provide strategic direction and actionable items for successful implementation.³²

8.2.2 Downtown Parks and Bay Connectivity Project

In 2017, the Redwood City Council established a goal to create a network of great open spaces throughout the City by connecting downtown, parks, open spaces, creeks, schools, and other points of interest such as Courthouse Square. The following year the Parks Department prepared the Downtown Parks Site Assessment and Feasibility Study for the selection of city-owned sites to transform for the purpose of open space in the downtown.³³ As of January 2022, a vision plan is under development for three downtown parks that feed a green linear park that resonates with the existing open space and further connects downtown to Redwood Creek and the waterfront under a phased approach.³⁴ Two new park locations have been identified in the Downtown Area as part of this project, one at Library Lot A that would connect the existing Roselli Garden and Mini-Park, and one at the City Hall Parking Lot on Main Street.

8.2.3 Redwood City General Plan

The City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. Goals and policies relevant to public services and recreation include the following:

- *Goal BC-1*: Provide 3.0 acres of park space for every 1,000 residents.

³² Redwood City, 2019. Parks, Recreation & Community Services Parks and Facilities Needs Assessment, March 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23148/637493466088030000>, accessed March 18, 2022.

³³ Redwood City, 2018. Downtown Parks Site Assessment and Feasibility Study, September 24, 2018. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/16942/636735592448830000>, accessed March 18, 2022.

³⁴ Redwood City, 2022c. Downtown Parks and Bay Connectivity Project. Available online: <https://www.redwoodcity.org/departments/parks-recreation-and-community-services/downtown-parks-assessment>, accessed March 18, 2022.

- *Policy BC-1.1:* Require parkland dedications and/or provision of on-site usable public space for significant development projects involving new residential construction.
- *Policy BC-1.2:* Maintain development fee programs to accumulate funds for the acquisition and improvement of parks and public/community places and facilities.
- *Policy BC-1.3:* Enhance street corridors, parkways, and public property between buildings to serve as functional recreation and green space.
- *Policy BC-1.4:* Develop guidelines for non-residential development projects to incorporate accessible plazas, paseos, and other public places.
- *Policy BC-1.5:* Consider all opportunities to create and acquire land for parks, community gardens, rooftop gardens, and community gathering places.
- *Policy BC-1.6:* Continue to consult with the school districts and Cañada College to supplement City park facilities with those of the districts and college.
- *Goal BC-2:* Create complete neighborhoods wherein every Redwood City resident lives within easy and safe walking distance of a park or community space.
- *Policy BC-2.1:* Develop some form of park or usable public green space within the following neighborhoods and centers: Downtown, Centennial, Stambaugh-Heller, Oak Knoll-Edgewood Park, Redwood Oaks, Friendly Acres, Redwood Village, Fair Oaks, and the Bayfront.
- *Policy BC-2.2:* Prioritize acquisition of land for active parks in areas where population is anticipated to grow and/or parkland is deficient.
- *Goal BC-3:* Ensure that public places evolve to meet the needs of changing city demographics and public interests and are accessible to all members of the community.
- *Policy BC-3.1:* Incorporate flexible design characteristics into the renovation of existing and development of new parks and community facilities. Consider incorporating education with recreation opportunities.
- *Policy BC-3.2:* Continue to build, renovate, and maintain parks and community facilities in a manner that is environmentally responsible.
- *Goal BC-4:* Provide state-of-the-art community facilities that support established programs, accommodate future needs, and are accessible to all members of the community.
- *Policy BC-4.3:* Include in the City's Capital Improvement Program programming and funds for timely community facility improvements.
- *Goal BC-5:* Create and maintain a system of trails, sidewalks, linear parks, and other connections that provide residents in all neighborhoods with opportunities to exercise, enjoy nature, and get to destinations without using a car.
- *Policy BC-5.3:* Provide connection between regional trails, county trails, and other jurisdictions' trail systems.
- *Policy BC-5.5:* Develop a strategy for the reclaiming of Redwood Creek as a functional natural waterway with recreation amenities along its banks.

- *Goal BC-6:* Provide recreation and human service programs and activities commensurate with identified community need.
- *Policy BC-7.1:* Provide convenient access to parks and other outdoor spaces for residents of all ages and income levels.
- *Goal BC-8:* Provide opportunities for residents of all ages and backgrounds to access high-quality education services that maximize each individual's potential.
- *Policy BC-8.7:* Continue to house libraries in attractive and inviting facilities capable of comfortably accommodating residents of all ages.
- *Policy BC-8.8:* Use development impact fees to fund library facilities, equipment, and programs that are needed as a result of new development projects.
- *Goal PS-11:* Provide a high level of public safety services.
- *Policy PS-11.1:* Work with the Police Department to determine and meet community needs for law enforcement services.
- *Policy PS-11.2:* Work with the Fire Department to determine and meet community needs for fire protection and related emergency services.

8.3 Impacts and Mitigation Measures

8.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe public services and recreation impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

8.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
 - Fire protection
 - Police protection
 - Schools
 - Parks
 - Other public facilities; or

- b) increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- c) include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

As discussed above, while analysis of impacts related to solid waste were included in Chapter 8, *Public Services*, of the DTPP Final EIR, topics related to solid waste are analyzed in Chapter 10, *Utilities and Infrastructure*, of this SEIR, to align with Appendix G of the 2021 CEQA Guidelines. Chapter 8 of the DTPP Final EIR also included analysis of impacts related to impairment or interference with an adopted emergency response plan or emergency evacuation plan. Similarly, this topic is discussed in Chapter 14, *Hazards and Hazardous Materials*, of this SEIR.

8.3.3 Impacts and Mitigation Measures

Overall impacts of the DTPP Plan-Wide Amendments on public services and recreation would be generally the same as those identified in the DTPP Final EIR, as further described below.

Impact PS-1: Implementation of the DTPP Plan-Wide Amendments would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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 or police protection, schools, parks, or other public facilities. (*Less than Significant*)

The DTPP Final EIR found that an increase in calls for service as a result of the DTPP would require expanded police patrols and potentially a police substation to maintain acceptable service ratios and response times. However, since specific needs in terms of size, staffing, equipment, and location were unknown, associated impacts were deemed speculative, and as a result impacts on police service were found to be less than significant. Since adoption of the DTPP, a police substation has been established within the DTPP area located at 2223 Broadway as described above in Section 8.1.1, *Police Service*.

Development as a result of the DTPP Plan-Wide Amendments would result in an increase in population and thus an increase in demand for police protection services from the RCPD. As discussed in Section 8.1.1, RCPD has 83 sworn officers as of January 2022. Based on the 2020 population of approximately 84,300 (see Chapter 5, *Population and Housing*), the existing officer to resident ratio is approximately 0.98 officers per 1,000 residents. The DTPP Plan-Wide Amendments propose residential increases of 830 new dwelling units and 1,167,100 net new square feet of office space. As discussed in Chapter 5, *Population and Housing*, growth pursuant to the proposed DTPP Plan-Wide Amendments would result in approximately 1,894 new residents, and approximately 5,070 new employees from the increase in office space. Thus, the ratio would be approximately 0.96 officers per 1,000 residents. While there is no adopted officer-to-resident service ratio in the City, the increase in population and associated increase in calls for service would increase demand for additional police personnel.

Development as a result of the DTPP Plan-Wide amendments would increase overall demand on police services in the City and also within the Downtown area. RCPD has indicated that the DTPP area is already an area that generates notable calls for service and quality of life calls, such as issues involving homelessness and mental health checks.³⁵ As discussed in Section 8.1.3, *Environmental Setting*, while RCPD is currently meeting City response time service goals of responding to emergency calls within 5 minutes, this is measured by the first officer arriving on scene, and action on emergency calls may take longer if a multi-unit response is required. For this reason, the DTPP Plan-Wide Amendments would also be likely to require additional police personnel within the amended DTPP area. Additional officers would be allocated over time, through the City's annual budget process.

Within the population increase expected as a result of the proposed DTPP Plan-Wide Amendments, in an area that is traditionally impacted disproportionately by calls for service and quality of life calls, the potential exists that new or physically altered police facilities may be needed in the future; however, such new or expanded facilities cannot be specified by RCPD at this time, and therefore it would be speculative to analyze any such improvements.³⁶ Should RCPD determine that an additional police substation or community policing center is necessary within the amended DTPP area, the facility would likely be incorporated into an existing or otherwise-planned structure similar to the existing Downtown Substation and would generate no new or more severe impacts on police services beyond those identified in the DTPP Final EIR. Therefore, the impact on police protection services would be *less than significant*.

Impact PS-2: Implementation of the DTPP Plan-Wide Amendments would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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 and emergency medical response service. (*Less than Significant*)

The DTPP Final EIR found that an increase in calls for service as a result of the DTPP was found to require additional fire and emergency medical service personnel and equipment in the future to maintain acceptable service ratios and response times. However, since specific needs in terms of size, staffing, equipment, and location were unknown, associated impacts were deemed speculative and as a result, impacts on fire and emergency medical service were found to be less than significant.

Development within the DTPP area would result in an increase in population and thus an incremental increase in demand for fire protection and emergency medical response services from the RCFD. The average response time for RCFD in the Fiscal Year 2020-21 was 5 minutes and

³⁵ Redwood City recently joined three other San Mateo County cities in launching a two-year pilot program, Community Wellness and Crisis Response Team, to evaluate the addition of a mental health professional to certain police calls concerning mental health-related issues.

³⁶ Redwood City Police Department (RCPD), 2022. RE: Request for Information - Police Services (Downtown Planning Environmental Impact Reports), Joshua Chilton, Administrative Lieutenant, March 18, 2022.

53 seconds, which did not meet RCFD's response time target of 5 minutes. However, this response time did meet the County's industry standard of 6 minutes and 59 seconds.³⁷ The increase in population as a result of the DTPP Plan-Wide Amendments would be expected to generate the typical range of service calls, including fire, emergency medical service, and other incidents and would contribute to the existing deficiency in response times. Additionally, RCFD has indicated that current staffing levels are not meeting RCFD standards.³⁸ While efforts are underway to increase staffing (as discussed in section 8.1.2), the increased demand for service as a result of the proposed DTPP Plan-Wide Amendments would contribute to the need for RCFD personnel. It is also possible that the introduction, as a conditional use, of Research and Development Laboratory use could increase the demand for emergency response; however, conditions imposed on any such uses would be anticipated to avoid significant effects. New fire personnel, vehicles, and equipment would be required to provide adequate response times to serve future development.³⁹ Additional firefighters and fire personnel would be allocated over time, through the City's annual budget process.

Since updating and expanding Fire Station 9 to meet staffing needs was included in the most recent Five-Year CIP covering FY 2021-22 through FY 2025-26, additional fire facilities are not expected to be required to serve the population as a result of the proposed DTPP Plan-Wide Amendments.⁴⁰ Therefore, it would be speculative to analyze any additional improvements to fire facilities at this time. However, if and when the construction or expansion of facilities to accommodate additional personnel or equipment becomes necessary, environmental review under CEQA, General Plan provisions, and City and Zoning Code regulations would all apply, and thereby avoid significant environmental impacts. The proposed Plan-Wide Amendments would generate no new or more severe impacts related to fire protection or emergency medical services beyond those identified in the DTPP Final EIR. Therefore, the impact on fire protection and emergency medical response services would be *less than significant*.

Impact PS-3: Implementation of the DTPP Plan-Wide Amendments would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (*Less than Significant*)

The DTPP Final EIR found that impacts related to the increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated would be less than significant.

Development as a result of the proposed DTPP Plan-Wide Amendments would result in an increase in population and thus an increased use in existing parks and recreation facilities serving

³⁷ RCFD, 2022b. RCFD Response to Information Request, Gina Hamilton, Management Analyst, April 4, 2022.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ The Fire Station 9 expansion is still in the planning phase, but given its urban location and that it would involve expansion of the existing 2nd and 3rd floors, a categorical exemption or negative declaration would likely be prepared and the expansion would not result in significant impacts.

the City. The increase in residents as a result of the DTPP Plan-Wide Amendments would result in an increase in use of existing City-owned parks and recreational facilities, especially since the Downtown area does not contain athletic fields, community centers, or a large amount of park area. However, the population increase and resulting use of existing City parks and recreational facilities would occur over time as individual projects are developed. Although not located within the amended DTPP area, Sequoia High School is adjacent to the amended DTPP area and contains football, soccer, and baseball fields. Individual projects developed within the amended DTPP area would be subject to the City's Parks Impact Fee and parkland dedication requirements (or Parkland In-Lieu Fee), which require either dedicating land to serve new residents, constructing new park amenities, and/or paying fees to offset the increased costs of providing new park facilities or park improvements for new development. The fees also allow the City to improve existing parkland and intensify the use of current recreational resources so that they can accommodate more users.

As discussed in Section 8.1.3, *Environmental Setting*, Redwood City residents also use nearby regional recreation facilities at Bair Island and Edgewood Park and Nature Preserve to meet their recreational needs. New residents within the amended DTPP area would be expected to use these facilities from time to time; however, given the vast size of the Edgewood Park and Nature Preserve facilities and the limited lengths of the Inner Bair Island trails, and the relatively infrequent usage that future residents would make of them, the increase in usage as a result of the proposed DTPP Plan-Wide Amendments would not result in their substantial deterioration. A modest increase in usage of built facilities, such as picnic areas, restrooms, and parking facilities, could result from development; however, this incremental growth would not be likely to trigger the construction of new built facilities over and above that already foreseen in the long-range planning documents for these regional park facilities.

Future projects developed as a result of the proposed DTPP Plan-Wide Amendments would also be subject to City open space requirements. These may include portions of the sites being reserved for open space and landscaping, and ground-level private, quasi-public, or public open space. Open space provided as part of future development projects would be expected to absorb a small portion of the demand for parks and recreational facilities by new residents. It should be noted that the Redwood City Parks, Recreation, and Community Services is currently working on a Downtown Parks and Bay Connectivity project studying three additional park sites in the downtown to create a large, linear park that extends from the Downtown to the Bay.

While the proposed DTPP Plan-Wide Amendments would increase the use of existing City parks and recreational facilities, individual projects developed would be subject to the City's Parks Impact Fee and parkland dedication requirements (or Parkland In-Lieu Fee), which would fund improvements to existing facilities as a result of increased demand. The increased demand on existing regional parks would also not substantially increase or accelerate the physical deterioration or degradation of existing parks and recreation facilities, as these areas are much larger in size and have planned for regional recreational use. In addition, open space developed as a result of requirements for individual projects developed as a result of the proposed DTPP Plan-Wide Amendments would also absorb a small portion of the demand for parks and recreational facilities by new residents. Therefore, there would be no new or more severe impacts from the

accelerated physical deterioration of parks and recreation resources associated with the DTPP Plan-Wide Amendments than the impacts identified in the DTPP Final EIR. This impact would be *less than significant*.

Impact PS-4: Implementation of the DTPP Plan-Wide Amendments would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (*Less than Significant*)

The DTPP proposed several public space and streetscape improvements, including a public park (in conjunction with the School District), the construction of which were found not to result in significant environmental impacts. Future development under the DTPP was described in the DTPP Final EIR to also be subject to Parks, Recreation, and Community Services Department Strategic Plan policies and applicable parkland dedication or in-lieu fee requirements, and new parkland could be provided inside or outside of the amended DTPP area in the future. However, specific parks and recreational facilities expansion needs were unknown and associated impacts were deemed speculative and as a result impacts on parks and recreational facilities were found to be less than significant. The original DTPP proposed two new blocks of Hamilton to feature a linear green, at least 40 feet in width, containing a fountain, seating, walkways, and other features. Development applications on file, although subject to change, are representative of the redevelopment potential of certain locations within the amended DTPP area. One of the projects (located at 2300 Broadway) would create a 15,000-square-foot plaza along Hamilton Street. With the new plaza, Hamilton Street, between Broadway and Marshall Street, in addition with Redwood Grove and the existing Courthouse Square would constitute a contiguous pedestrian-only area of 33,000 square feet. It is also possible that other publicly accessible open space may be provided in conjunction with other development projects. However, development of any such project-specific open spaces would not result in new impacts beyond those considered here because construction of open spaces would be undertaken as a small part of overall project construction activities and operation of such facilities would largely accommodate populations that would already be present in the DTPP area.

Development within the amended DTPP area would result in an increase in population and thus an increased demand for parks and recreation facilities. The City has a service-level objective for parkland of 3 acres of parkland per 1,000 residents. Based on the City's 2020 population of approximately 84,300 (see Chapter 5, *Population and Housing*), the existing parkland ratio is approximately 2.7 acres per 1,000 residents. With the addition of 1,893 net new residents a result of the proposed DTPP Plan-Wide Amendments (see Chapter 5), the ratio would be approximately 2.66 acres per 1,000 residents⁴¹. Therefore, development within the amended DTPP area would worsen this existing deficiency. Based on the City's desired General Plan service levels, the additional residents would generate a demand for up to approximately 7.38 acres of additional parkland.

⁴¹ $229.95 \text{ (total acres of parkland)} / (86,193 \text{ (total residents)} / 1000)$

Individual projects developed as a result of the DTPP Plan-Wide Amendments would be subject to the City's Parks Impact Fee and parkland dedication requirements (or Parkland In-Lieu Fee), which require either dedicating land to serve new residents, constructing new park amenities, and/or paying fees to offset the increased costs of providing new park facilities or park improvements for new development. Although development as a result of the proposed DTPP Plan-Wide Amendments would incrementally worsen existing parkland deficiencies in the City, individual projects would be subject to the City's Parks Impact Fee and parkland dedication requirements (or Parkland In-Lieu Fee) as they are developed. The City's Parks Impact Fee and Parkland In-Lieu Fee would allow the City to purchase parkland, make park improvements, and provide recreation facilities to meet the demand generated by new residential development.

As the residential population of Redwood City increases as a result of the proposed DTPP Plan-Wide Amendments, the construction of new parks and recreational facilities in the City would occur. The park projects developed as a result of the City's Parks Impact Fee and Parkland In-Lieu Fee would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities. Therefore, there would be no new or more severe impacts on recreational facilities than the impact identified in the DTPP Final EIR. This impact would be *less than significant*.

Impact PS-5: Implementation of the DTPP Plan-Wide Amendments would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for schools. (*Less than Significant*)

The DTPP Final EIR found that the payment of required school impacts fees would address the DTPP impact on school services and impacts were determined to be less than significant. Since adoption of the DTPP, new school impact fee studies have been performed by RCSD and SUHSD to maintain levels of service.

Development as a result of the proposed DTPP Plan-Wide Amendments would result in an increase in population and thus an increase in school-aged children that could be enrolled in RCSD and SUHSD schools. As shown in **Table 8-2**, the DTPP Plan-Wide Amendments is estimated to result in approximately 341 new school-age children, consisting of 125 RCSD K-5th grade students, 50 RCSD 6th-8th grade students, and 166 SUHSD 9th-12th grade students.

The new students generated as a result of the amended DTPP area would be added to the applicable district-wide enrollment. As discussed in Section 8.1.4, RCSD student enrollment did not exceed facilities capacity at the elementary and middle school level in school year 2020/2021. However, addition of elementary and middle school-aged students to RCSD due to development associated with the amended DTPP area would exceed the current capacity at the collective RCSD schools and at Clifford School. Thus, facility updates to increase capacity would also

**TABLE 8-2
ESTIMATED STUDENT GENERATION**

Grade Group	Students per Residential Unit ^a	Estimated DTPP Plan-Wide Amendment School-Age Children ^b
Transitional Kindergarten – 5th Grade (RCSD)	0.15	125
6th – 8th Grade (RCSD)	0.06	50
9th – 12th Grade (SUHSD)	0.2	166
	Total	341

NOTES:

- ^a The student generation rates for RCSD are those contained in the 2018 *Review of Fee Justification Documentation*, for multi-family units (RCSD, 2018). The student generation rate for SUHSD is contained in the *Level I Developer Fee Study for Sequoia Union High School District* (SUHSD, 2018).
- ^b Assumes 830 net new multi-family units to capture the residential development potential specific to the proposed DTPP Plan-Wide Amendment expansion sub-area of the DTPP.

SOURCE: RCSD, 2018; SUHSD, 2018.

likely be required for RCSD and particularly at Clifford School to accommodate the growth in elementary and middle school-aged students. The addition of high school-aged students to SUHSD due to development within the proposed DTPP extension area would exceed the current capacity at the collective SUHSD high schools and at Sequoia High School. Thus, facility updates to increase capacity would also likely be required for SUHSD and particularly at Sequoia High School to accommodate the growth in high school-aged students. Any expansion of school facilities would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities. It should be noted that the enrollment increase would occur gradually, over time, as individual development projects come forward for City consideration, are approved, and are built. It is possible that other factors could decrease enrollment, as has occurred in the recent past. At any rate, it is anticipated that any facilities improvements, if required, would be able to be undertaken in a reasonably planned manner.

As described in Section 8.1.4, projects developed within the proposed amended DTPP area would be required to comply with California Government Code Section 65996, which would mitigate the potential effect on public school facilities from the new student population that would be generated by the DTPP Plan-Wide Amendments. California Government Code Section 65996 and Education Code Section 17620 authorize school districts to levy a development fee on new residential projects to offset the costs associated with new students present in the districts as a result of new development. Section 65996 states that the payment of school impact fees that may be required by a State or local agency constitutes full and complete mitigation of school impacts from development. There would be no new or more severe impacts on school services associated with the DTPP Plan-Wide Amendments than the impact identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

Impact PS-6: Implementation of the DTPP Plan-Wide Amendments would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for libraries. (*Less than Significant*)

The DTPP Final EIR did not specifically identify impacts to public libraries. There are no specific service ratios or other performance objectives for RCPL libraries identified by the City; however, the population increase caused by the proposed DTPP Plan-Wide Amendments would likely result in a modest increase in demand for services from RCPL libraries. However, such increased demand, in and of itself, would not be anticipated to require new or expanded facilities because the added population would be less than 2.5 percent of existing Citywide population.

RCPL libraries are primarily funded by the City. Development within the proposed amended DTPP area would result in the generation of new property taxes and other revenues that go into the City's General Fund, and thus could provide more resources to cover the increased budget for library services. In addition, RCPL offers access to digital content such as eBooks, online learning tools, and online database services, which allow remote access to RCPL materials outside of physical facilities.

A study to identify needs and opportunities for expansion of the current Downtown Library facility in FY 2022-23 is included in the most recent Five-Year Capital Improvement Program covering Fiscal Year (FY) 2021-22 through FY 2025-26, as event and activity spaces, seating, and community meeting rooms are all inadequate to meet current demand.⁴² The projected increase in demand as a result of the proposed DTPP Plan-Wide Amendments would be included in the scope of this study. Any Downtown Library facility expansion or improvements developed as a result of the RCPL's study would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities and the DTPP Plan-Wide Amendments would not result in new or more severe impacts than were identified in the DTPP Final EIR. Therefore, impacts related to libraries associated with the DTPP Plan-Wide Amendments would be *less than significant*.

⁴² Redwood City, 2021b. Five-Year Capital Improvement Program FY 2021-22 Through FY 2025-26. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23900/637649954106170000>, accessed March 18, 2021.

8.4 References

- California Department of Education (CDE), 2022. DataQuest, Enrollment Multi-Year Summary by Grade. Available online: <https://www.cde.ca.gov/ds/ad/dataquest.asp>, accessed March 18, 2022.
- Climate Online, 2021. Program partnering mental health clinicians with cops on certain 911 calls starts Monday, December 2, 2021. Available: <https://climaterwc.com/2021/12/02/program-partnering-mental-health-clinicians-with-police-officers-on-certain-911-calls-starts-monday/>, accessed April 6, 2022.
- Institute of Museum and Library Services (IMLS), 2021. 2021 National Medal for Museum and Library Service. Available online: <https://www.imls.gov/our-work/national-medal-museum-and-library-service/2021-national-medal-museum-and-library-service>, accessed March 18, 2022.
- Peninsula Open Space Trust (POST), 2022. Bair Island. Available online: <https://openspacetrust.org/hike/bair-island/>, accessed March 18, 2022.
- Redwood City, 2010. A New General Plan for Redwood City, Draft Environmental Impact Report, May 2010.
- Redwood City, 2018. Downtown Parks Site Assessment and Feasibility Study, September 24, 2018. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/16942/636735592448830000>, accessed March 18, 2022.
- Redwood City, 2019. Parks, Recreation & Community Services Parks and Facilities Needs Assessment, March 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23148/637493466088030000>, accessed March 18, 2022.
- Redwood City, 2021a. Annual Comprehensive Financial Report Fiscal Year Ended June 30, 2021. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/24498/637775977622530000>, accessed March 18, 2022.
- Redwood City, 2021b. Five-Year Capital Improvement Program FY 2021-22 Through FY 2025-26. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23900/637649954106170000>, accessed March 18, 2021.
- Redwood City, 2022a. Downtown Services Unit. Available online: <https://www.redwoodcity.org/departments/police-department/police-divisions/patrol-division/downtown-services-unit>, accessed March 18, 2022.
- Redwood City, 2022b. Facilities. Available online: <https://www.redwoodcity.org/departments/parks-recreation-and-community-services/facilities>, accessed March 18, 2022.
- Redwood City, 2022c. Downtown Parks and Bay Connectivity Project. Available online: <https://www.redwoodcity.org/departments/parks-recreation-and-community-services/downtown-parks-assessment>, accessed March 18, 2022.

- Redwood City Fire Department (RCFD), 2022a. Fire Stations. Available online: <https://www.redwoodcity.org/departments/fire-department/about-the-department/fire-stations>, accessed March 18, 2022.
- RCFD, 2022b. RCFD Response to Information Request, Gina Hamilton, Management Analyst, April 4, 2022.
- Redwood City Police Department (RCPD), 2022. RE: Request for Information - Police Services (Downtown Planning Environmental Impact Reports), Joshua Chilton, Administrative Lieutenant, March 18, 2022.
- Redwood City Public Library (RCPL), 2022. RCPL Limited Edition. Available online: <https://www.redwoodcity.org/departments/library/rcpl-limited-edition>, accessed March 18, 2022.
- Redwood City School District (RCSD), 2018. Review of Fee Justification Documentation, September 13, 2018. Prepared by Schoolhouse Services. Accessed March 18, 2022.
- RCSD, 2022. My School Locator. Available online: <https://locator.decisioninsite.com/?studyId=235218>, accessed March 18, 2022.
- San Mateo County Parks Department, 2022. Edgewood Park & Natural Preserve. Available online: <https://parks.smcgov.org/edgewood-park-natural-preserve>, accessed March 18, 2022.
- San Mateo County Sheriff, 2022. San Mateo County Sheriff's Office Transit Police Bureau. Available online: <https://www.smcsheriff.com/patrol-services/transit-police-bureau>, accessed January 31, 2022.
- Sequoia Union High School District (SUHSD), 2018. Level I Developer Fee Study for Sequoia Union High School District, March 1, 2018. Prepared by Jack Schreder & Associates, Inc. Available online: https://www.seq.org/documents/Departments/Construction/constructionfix/SUHSD%20Level%20I%20Developer%20Fee%20Study%2003_01_18.pdf; accessed March 18, 2022.

CHAPTER 9

Transportation and Circulation

This SEIR chapter analyzes the effects of the changes to transportation and circulation proposed as part of the proposed DTPP Plan-Wide Amendments, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts. The information in this section is based primarily on the Transportation Analysis for the proposed DTPP Plan-Wide Amendments conducted by Fehr & Peers in November 2022 and provided in **Appendix C** of this SEIR.

In accordance with the Redwood City Transportation Analysis Manual (TAM),¹ a Local Transportation Analysis (LTA) was prepared in parallel with this Draft SEIR for the proposed DTPP Plan-Wide Amendments; the LTA analyzes non-CEQA transportation issues for General Plan and Congestion Management Program consistency, and is separate from this Draft SEIR. Non-CEQA transportation issues included in the LTA include vehicle, transit, bicycle, and pedestrian network operations and constraints, as well as site access and circulation.

Findings of the DTPP Final EIR

The DTPP Final EIR identified a number of significant impacts on transportation and circulation facilities, including impacts to intersection and freeway operations, and to transit service. The intersection and freeway segment impacts were based on the performance measures of vehicle delay and level of service (LOS). Since preparation of the DTPP Final EIR, the CEQA Guidelines have been revised (Public Resources Code, section 21099, subdivision [b][3]) and these performance measures can no longer be used to determine the significance of a transportation impact under CEQA.² Following this change, vehicle miles traveled (VMT) is now used by the City to assess vehicle-related impacts and, for this reason, this SEIR evaluates impacts to passenger vehicle travel using VMT rather than vehicle delay and LOS. Additional detail on the State legislation that led to this change in performance metrics, SB 743, is provided in Section 9.2, *Regulatory Setting*.

¹ City of Redwood City, 2020. *Redwood City Transportation Analysis Manual*, July 21, 2020. Available at: <https://www.redwoodcity.org/home/showpublisheddocument?id=22106>.

² These transportation performance metrics are still considered by the City, and are documented in the LTA prepared for the Transit District. While relevant to the City's project approval process, the analyses contained within the LTA are not required under CEQA and, therefore, are not part of this Draft SEIR.

As background information, the significant intersection impacts identified in the DTPP Final EIR were located at the following seven study intersections during the PM peak hour within the DTPP Area:

- El Camino Real and Whipple Avenue
- El Camino Real and Jefferson Avenue
- Main Street and Woodside Road
- Middlefield Road and Woodside Road
- Broadway and Woodside Road
- Veterans Boulevard and Whipple Avenue
- Veterans Boulevard and Woodside Road

The DTPP Final EIR identified mitigation measures to address these intersection impacts; however, only one of the study intersections where a significant impact was identified would be mitigated to a less-than-significant-level: Veterans Boulevard and Whipple Avenue. For the remaining six study intersections, a significant and unavoidable impact was identified due to the fact that the mitigation measures identified for those intersections would require approvals from an agency (Caltrans) other than the Lead Agency (Redwood City) that could not be guaranteed. Similarly, Redwood City's lack of authority to independently implement mitigation measures identified to address significant impacts on the following four study freeway segments also lead to a significant and unavoidable impact determination:

- Northbound US 101 between Marsh Road and Woodside Road (impact on mixed-flow lanes during both AM and PM peak hours; impact on HOV lane during the PM peak hour)
- Northbound US 101 between Whipple Avenue and Holly Street (impact on mixed-flow lanes during PM peak hour)
- Southbound US 101 between Holly Street and Whipple Avenue (impact on mixed-flow lanes during PM peak hour)
- Southbound US 101 between Woodside Road and Marsh Road (impact on mixed-flow and HOV lanes during both AM and PM peak hours)

The significant transit service impact identified in the DTPP Final EIR related to additional transit demand that would be generated by development in the DTPP area, and whether existing and planned transit service would be adequate to serve this increased demand.³ The DTPP Final EIR identified a mitigation measure to address this impact, requiring that the City coordinate with transit service providers to facilitate expanded transit services to accommodate increased transit demand resulting from buildout of the DTPP. However, because of uncertainty related to the timing and execution of service enhancements planned by existing and future transit service providers in the DTPP area (e.g., California High Speed Rail Authority, Caltrain, SamTrans, etc.), the DTPP Final EIR identified a significant and unavoidable transit service impact.

Cumulative impacts identified in the DTPP Final EIR are discussed in Chapter 17 of this SEIR.

³ This chapter of the SEIR refers to the "amended DTPP area" to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

9.1 Environmental Setting

This section describes existing transportation conditions including the nearby land uses that affect travel demand and the transportation facilities—the roadway network, transit service, and pedestrian and bicycle facilities—in the vicinity of the amended DTPP area. Future planned facilities that would enhance the existing system are also described.

9.1.1 Roadway Network

As shown in Figure 3-1, *Project Site Location* (Chapter 2, *Project Description*), the following roadways provide access to and within the amended DTPP area: El Camino Real (SR 82), Woodside Road (SR 84), Alameda de las Pulgas, Arguello Street, Bradford Street, Brewster Avenue, Broadway, Convention Way, East Bayshore Road, Hamilton Street, Hudson Street, Jefferson Avenue, Main Street, Maple Street, Marshall Street, Veterans Boulevard, Walnut Street, and Whipple Avenue. Descriptions of these roadways are presented below.

El Camino Real (SR 82) is a four- to six-lane, north-south major arterial and serves as the western boundary of the amended DTPP area. El Camino Real extends from Santa Clara County through San Mateo County. El Camino Real provides direct access to the amended DTPP area.

Woodside Road (SR 84) is a four-lane, east-west major arterial located toward the southern edge of the City. Woodside Road extends from Redwood City through Woodside. Woodside Road provides regional access to the amended DTPP area, including access to I-280 and US 101.

Alameda de las Pulgas is a two-lane, north-south connector street located between San Carlos and Woodside and is lined with primarily residential uses. Alameda de las Pulgas provides regional access to the amended DTPP area.

Arguello Street is a two-lane, north-south neighborhood connector boulevard that provides access between Whipple Avenue and Broadway and primarily serves commercial and residential uses.

Bradford Street is a two-lane, east-west connector street that stretches from Arguello Street to Walnut Street, with a break at Winslow Street, and is lined with a mix of residential and commercial uses.

Brewster Avenue is a two- to four-lane, east-west local road bicycle boulevard that stretches from Main Street to Upland Road. Brewster Avenue generally forms the northern boundary of the amended DTPP area, and is lined with a mix of retail, office, school, and residential land uses.

Broadway is a two-lane, east-west transit street located between Elwood Street and Fifth Avenue. Broadway serves as one of the primary roadways connecting the downtown area with surrounding roadways in Redwood City. Broadway provides access through the center of the amended DTPP area. Both sides of Broadway are lined with a mix of restaurants, office, and retail uses.

California Street is a short (i.e., two block) two-lane, north-south local street located between Broadway and James Avenue. California Street provides a connection to the Redwood City Transit Center and is lined with commercial uses and parking lots.

Convention Way is a two-lane, north-south neighborhood connector street located between Veterans Boulevard and Walnut Street. Convention Way provides direct and local access to the amended DTPP area, and is lined with a mix of housing, offices, and commercial uses.

East Bayshore Road is a two-lane, east-west connector street that stretches from Whipple Avenue to the Bair Island Road roundabout. East Bayshore Road provides regional access to the amended DTPP area via US 101.

Hamilton Street is a two-lane, north-south neighborhood connector street that extends between Winslow Street and Marshall Street and is lined with a mix of restaurants, commercial uses, and offices.

Hudson Street is a two-lane north-south connector street that extends from Whipple Avenue to Woodside Road and is lined with primarily residential uses.

Jefferson Avenue is a two- to four-lane, east-west connector street that extends from Cañada Road to Veterans Boulevard. Jefferson Avenue serves regional and local trips throughout Redwood City and provides regional access to the amended DTPP area. East of El Camino Real, Jefferson Avenue has primarily commercial land uses, whereas west of El Camino Real, the street is primarily residential.

Main Street is a two-lane, east-west neighborhood connector street that extends between Convention Way and El Camino Real. Main Street serves as one of the primary roadways connecting the downtown area with surrounding roadways in Redwood City. Railroad tracks divide the east and west sides, and the street is lined with a mix of restaurants, residential uses, office, and some small businesses.

Maple Street is a two-lane, east-west neighborhood connector street that provides access between El Camino Real and the industrial and public service uses east of US 101 including access to the bay. Maple Street generally forms the southern boundary of the amended DTPP area and is lined with a mix of housing, restaurants, office, and local serving uses.

Marshall Street is a two-lane, north-south neighborhood connector street that extends between Arguello Street and Chestnut Street. Marshall Street provides direct access to the amended DTPP area and is lined with a mix of housing, offices, and commercial uses.

Veterans Boulevard is a six-lane, east-west neighborhood connector boulevard that extends between the US 101 southbound off-ramp and Woodside Road (SR 84) and provides regional as well as local access to the Bay Area and the amended DTPP area, and is lined with mix of housing, office, and commercial uses. It forms part of the eastern boundary of the amended DTPP area.

Walnut Street is a two-lane, north-south connector street that extends from Stambaugh Street and ends in a cul-de-sac in the north. Walnut Street provides direct access to the eastern portion of the amended DTPP area via Veterans Boulevard and is lined with a mix of restaurants, offices, and retail.

Whipple Avenue a four-lane, east-west connector street that extends from East Bayshore Road to Upland Road. Whipple Avenue connects various parts of Redwood City with US 101 including access to the greater Bay Area, and is lined with a mix of housing, offices, retail, restaurants, and local serving uses.

Winklebleck Street is a short (i.e., one block) two-lane, east-west local street that extends from El Camino Real to California Street. The street is lined with commercial uses and parking lots.

9.1.2 Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals at signalized intersections. Within and in the immediate vicinity of the amended DTPP area, pedestrian signals and sidewalks are provided on both sides of El Camino Real, Jefferson Avenue, Arguello Street, Whipple Avenue, Brewster Avenue, Veterans Boulevard, Broadway, Main Street, Marshall Street, Hamilton Street, Walnut Street, Alameda de las Pulgas, Hudson Street, and Maple Street. The following locations are missing pedestrian facilities:

- No sidewalk on the north side of Whipple Avenue, between Veterans Boulevard and East Bayshore Road
- No crosswalk on west leg of Arguello Street and Broadway intersection
- No crosswalk on south leg of Whipple Street and El Camino Real intersection
- No crosswalk on east leg of Veterans Boulevard and Whipple Street intersection

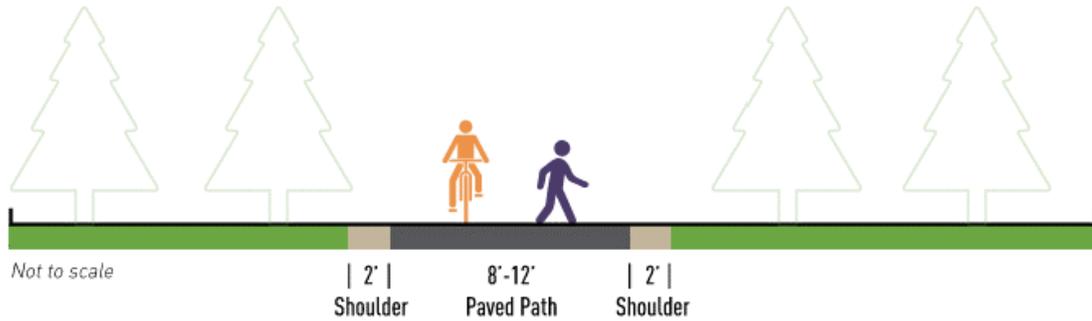
9.1.3 Bicycle Facilities

Bikeway planning and design in California typically relies upon guidelines and design standards established by California Department of Transportation (Caltrans) in the Highway Design Manual (Chapter 1000: Bikeway Planning and Design). The City uses these guidelines to define five general bikeway facility classifications, as outlined below.

Class I Paths (Shared-use Paths) provide a completely separate right-of-way and are designated only for bicycle and pedestrian use. Shared-use paths serve corridors where there is enough right-of-way, or space, to allow them to be constructed or where on-street facilities are not appropriate due to vehicular volumes, speeds, or other roadway characteristics. There are currently no Class I paths serving the amended DTPP area; however, planned Class I bicycle facilities are proposed along East Bayshore Road and Redwood Creek.

SHARED-USE PATH (CLASS I)

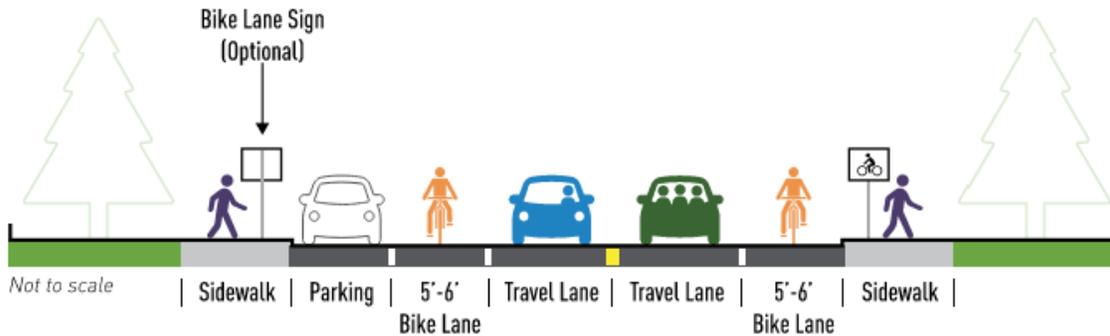
Completely separated right-of-way for exclusive use of bicycles and pedestrians



Class II Bikeways (Bicycle Lanes) are dedicated lanes for bicyclists, generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends and signage. Bicycle lanes are typically five- to six-foot wide. Adjacent vehicle parking and vehicle/pedestrian cross-traffic are permitted. There are segments of Class II bike lanes along Whipple Avenue, Brewster Avenue, Marshall Street, Winslow Street, Arguello Street, Veterans Boulevard, Broadway, Main Street, Alameda de las Pulgas, Hudson Street, and Maple Street between El Camino Real and the Caltrain railroad tracks. Class II bikeways that will provide additional bicycle access to the amended DTPP area, as shown in Walk Bike Thrive,⁴ are proposed along Arguello Street, Broadway, Chestnut Street, and Whipple Avenue.

BICYCLE LANE (CLASS II)

On-street striped lane for one-way bike travel

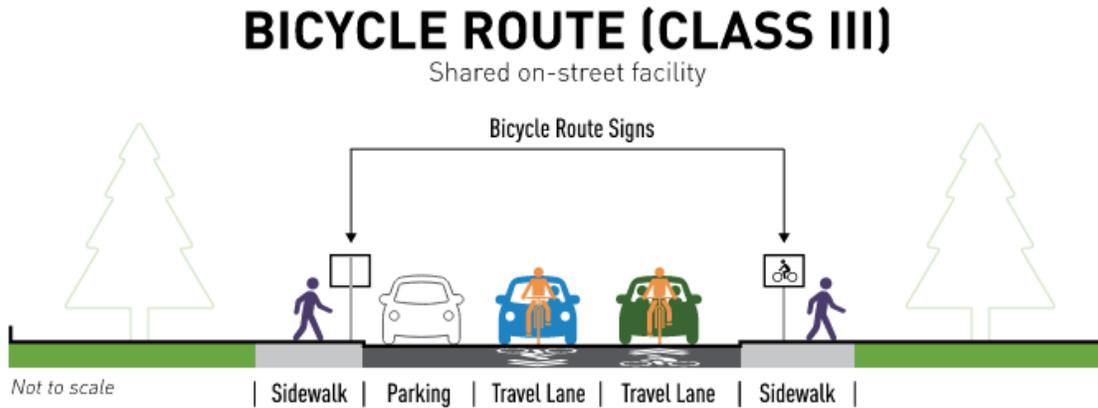


Class III Bike Routes are designated by signs or pavement markings for shared use with pedestrians or motor vehicles but have no separated bike right-of-way or lane striping. Bike routes serve either to a) provide a connection to other bicycle facilities where dedicated facilities are infeasible, or b) designate preferred routes through high-demand corridors. There are Class III bikeways along segments of Broadway, Brewster Avenue, Jefferson Avenue, and Whipple Avenue that provide access to the amended DTPP area. Walk Bike Thrive includes additional

⁴ City of Redwood City, 2022. *Redwood City Walk Bike Thrive*, June 2022. Available at: https://www.rwcwalkbikethrive.org/_files/ugd/06d7f0_d8e5440df8bc485da7bf731455da39bb.pdf.

planned Class III bikeways that would provide bicycle access to the amended DTPP area along Arguello Street, Middlefield Road, Walnut Street, Chestnut Street, and Lathrop Street.

Class III Bicycle Boulevards are “quiet” or “slow” streets, with low motor-vehicle volumes and speeds, designed to prioritize bike travel by discouraging through trips by cars. Bike boulevards share space with cars but along with traffic calming improvements that gives priority to bicyclists. Currently, the only bike boulevard in Redwood City is on Vera Avenue. Walk Bike Thrive includes additional planned Class III bicycle boulevards that would provide additional bicycle access to the amended DTPP area along Franklin Street and Lathrop Street.



Class IV Bikeways (Separated Bikeways) provide a right-of-way designated exclusively for bicycle travel within a street and are protected from other vehicle traffic by physical barriers, including, but not limited to, grade separation, flexible posts, inflexible vertical barriers such as raised curbs, or parked cars. There are Class IV bicycle facilities on Middlefield Road between Woodside Road and Maple Street, and on Maple Street between Lathrop Street and the railroad tracks. Walk Bike Thrive includes additional planned Class IV facilities along Brewster Avenue, El Camino Real, James Avenue, Middlefield Road, Main Street, Maple Street, and Winslow Street.

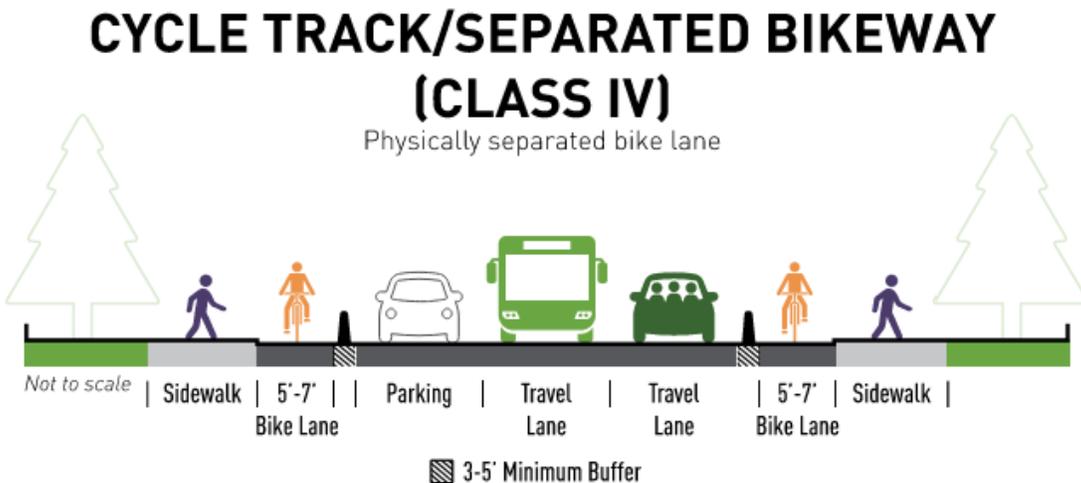
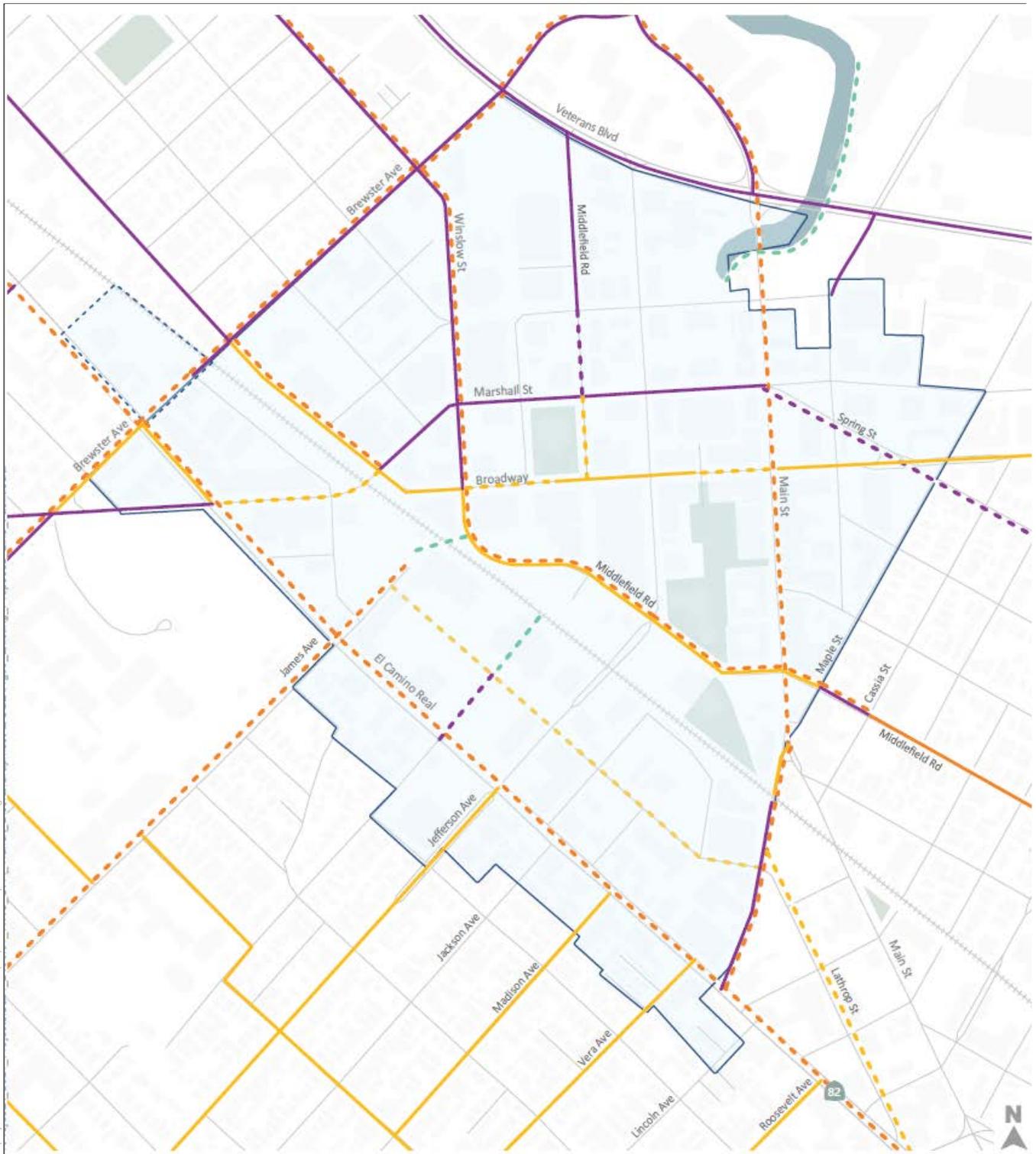


Figure 9-1 illustrates the existing bicycle facilities near the amended DTPP area.



202110202100421.XX - RWC both proj10202100421.01 - DTPP Planwide (GK) SEIR/05 Graphics-GIS-Modeling/Illustrator

SOURCE: Fehr & Peers, 2022

DTPP Plan-Wide Amendments SEIR

Figure 9-1
Existing and Planned Bicycle Facilities



9.1.4 Transit Service

This section summarizes local and regional transit connectivity in the amended DTPP area, including bus and commuter rail. **Figure 9-2** illustrates the existing transit facilities and routes in the amended DTPP area.

SamTrans Bus Service

Bus service is provided by the San Mateo County Transit District (SamTrans). Eight SamTrans routes (270, 275, 278, 295, 296, 2960 (OWL), 397 OWL, 398) and the El Camino Real (ECR) bus route run along El Camino Real with stops north of the Jefferson Avenue intersection, Winklebleck Street, Brewster Avenue, and the Redwood City Transit Center. This reflects route changes that took effect in August 2022 as part of the phased implementation of the *Reimagine SamTrans* project.⁵ The Redwood City Transit Center directly serves the amended DTPP area. El Camino Real, with SamTrans ECR service, qualifies as a high-quality transit corridor since the frequency of service is 15 minutes or less during the morning and evening peak commute periods. **Table 9-1** summarizes the transit service operating characteristics in the immediate vicinity of the amended DTPP area.

**TABLE 9-1
EXISTING TRANSIT SERVICE**

Route	From	To	Weekday		Weekends	
			Operating Hours	Peak Headway (minutes)	Operating Hours	Peak Headway (minutes)
SamTrans Local Bus Routes						
270	Redwood City Transit Center	Redwood City Transit Center	6:30am–7:10pm	60	7:30am–7:10pm	60
278	Redwood City Transit Center	Cañada College	6:20am–8:45pm	60	7:20am–7:15pm	60
295	San Mateo Caltrain	Redwood City Transit Center	6:20am–7:00pm	60	N/A	
296	Redwood City Transit Center	Palo Alto Transit Center	5:15am–10:40pm	20	7:45am–8:00pm	30
2960	Redwood City Transit Center	Palo Alto Transit Center	3:40 am – 2:10 am	30	3:45 am – 2:20 am	60
SamTrans Express Bus Routes						
ECR	Palo Alto Transit Center	Daly City BART	4:05am–1:50am	15	4:45am–2:25am	15
397 OWL	San Francisco	Palo Alto Transit Center	12:45am–6:40am	60	12:45am–6:40am	60
398	San Francisco	Redwood City Transit Center	6:00am–9:20pm	- Two morning runs - Two evening runs	N/A	
Caltrain						
All Routes	Gilroy/San José	San Francisco	4:20am–1:45am	10	7:10am–1:50am	60

SOURCE: Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

⁵ <https://www.samtrans.com/reimagine-samtrans-implementation>.



2021\1D202\100421\XX - RWC both proj\1D202\100421.01 - DTPP Planwide (GK) SEIR\05 Graphics-GIS-Modeling\Illustrator

SOURCE: Fehr & Peers, 2022

DTPP Plan-Wide Amendments SEIR

Figure 9-2
Existing Transit Service



Commuter Rail Service

Caltrain is a commuter heavy rail service that runs from downtown San Francisco (4th and King Streets) to downtown San José (Diridon Station), with a limited number of commute period trains running farther south to Gilroy. The Redwood City Transit Center, located within the boundaries of the amended DTPP area, serves Caltrain and multiple SamTrans bus and local commuter shuttle routes and is considered a major transit stop. It is anticipated that the Redwood City Transit Center will be relocated to the north of the existing location to provide space for an enlarged four-track Caltrain station. This relocation would allow for expanded service with completion of Caltrain’s electrification program (currently under construction) and for long-term implementation of the Caltrain 2040 Business Plan, which calls for substantially increased frequency of service and the use of the Redwood City Transit Center as a transfer point between local and express trains.

During commute periods, Caltrain offers express service (“Baby Bullet”) between downtown San José and San Francisco, which allows the trip between San Francisco and San José to be made in one hour. This service stops at a limited number of stations, including Redwood City. Caltrain also offers local service, which serves all stations and limited-stop service, which serves more stations than the Baby Bullet but not all stations. All trains stop at the Redwood City Transit Center. In 2019 (pre-pandemic), the average mid-weekday ridership at the Redwood City Transit Center was approximately 4,220 passengers, with system-wide ridership off approximately 64,000 passengers, making it the fifth busiest in the Caltrain system.⁶ The system-wide average weekday ridership in 2020 was approximately 25,000 passengers;⁷ 2020 ridership information for the Redwood City Transit Center is not available. The decrease in system-wide ridership in 2020 is due to COVID-19 and the corresponding stay-at-home orders.

Section 9.2 of DTPP Final EIR Chapter 9, *Transportation and Circulation*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

9.2 Regulatory Setting

9.2.1 Senate Bill 743

The operations of transportation facilities have traditionally been described with the term LOS. LOS describes traffic flow from the driver’s perspective based on factors such as speed, travel time, delay, and freedom to maneuver. SB 743 was adopted in 2013 and directed the State of California’s Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts and make corresponding revisions to the CEQA Guidelines. Following several years of draft proposals and related public comments, OPR settled upon daily VMT as the preferred metric for assessing passenger vehicle related impacts. OPR issued revised CEQA

⁶ Caltrain, 2019. *Caltrain 2019 Annual Passenger County – Key Findings*, 2019. Available at: <https://www.caltrain.com/Assets/Stats+and+Reports/2019+Annual+Key+Findings+Report.pdf>.

⁷ National Transit Database, 2020. *Caltrain 2020 Annual Agency Profile*, 2020. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2020/90134.pdf.

Guidelines in December 2018 along with a Technical Advisory on Evaluating Transportation Impacts in CEQA⁸ to assist practitioners in implementing the CEQA Guidelines to use VMT as the new metric. Under the revised Guidelines (Public Resources Code section 21099, subdivision (b)(3), vehicle LOS can no longer be used as a determinant of significant environmental impacts.

9.2.2 Plan Bay Area

Plan Bay Area is overseen by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG). It serves as the region’s Sustainable Communities Strategy (SCS) pursuant to SB 375 and the 2050 Regional Transportation Plan (RTP), integrating transportation and land use strategies to manage greenhouse gas (GHG) emissions and plan for future population growth. The RTP and SCS include policies that call for shifting more travel demand to transit and accommodating growth along transit corridors in “Priority Development Areas.” ABAG and the MTC adopted *Plan Bay Area 2050* in October 2021⁹ although it will be some time before local transportation models are updated to reflect *Plan Bay Area 2050* (these models currently incorporate data from *Plan Bay Area 2040* because there is typically a time lag of at least a year or two between the release of updated regional growth projections and the incorporation of these projections into county and sub-regional transportation models, such as the travel demand model used in this analysis).

Major regional transportation projects in the vicinity of the amended DTPP area included in *Plan Bay Area 2050* include pricing strategies on US 101 (i.e., per-mile tolling), new high-speed rail service, new ferry service between Redwood City and San Francisco’s Ferry Terminal, Caltrain electrification and increased service frequency, and improvements to local and express bus services.

9.2.3 San Mateo County Comprehensive Bicycle and Pedestrian Plan

The City/County Association of Governments of San Mateo County (C/CAG), with support from the San Mateo County Transportation Authority, has developed the 2021 San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBPP)¹⁰ to improve walking and bicycling conditions in San Mateo County. By recommending a connected network of biking and walking facilities based on the best practices in the field, the CBPP strives to make biking and walking safer and more comfortable for all, and improve health, accessibility, and livability throughout the county. The six goals of the CBPP are:

- **Connectivity.** Establish a connected network of facilities for bicyclists and pedestrians.

⁸ State of California Governor’s Office of Planning and Research, 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018. Available at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

⁹ Metropolitan Transportation Commission and Association of Bay Area Governments, 2021. *Plan Bay Area 2050*, October 2021. Available at: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

¹⁰ City/County Association of Governments of San Mateo County, 2021. *2021 C/CAG San Mateo County Comprehensive Bicycle and Pedestrian Plan*, June 2021. Available at <https://ccag.ca.gov/wp-content/uploads/2021/06/San-Mateo-County-Comprehensive-Bicycle-and-Pedestrian-Plan-Update-Final-Plan.pdf>.

- **Mode Shift.** Promote more people bicycling and walking for transportation and recreation.
- **Safety.** Improve safety for walking, bicycling, and accessing transit.
- **Complete Streets for All.** Advance Complete Streets principles and the accommodation of all roadway users.
- **Equity.** Develop, prioritize, and fund projects to advance equity.
- **Regional Collaboration.** Promote collaboration and technical support.

9.2.4 City of Redwood City General Plan

According to the City’s TAM, projects must demonstrate consistency with the Redwood City General Plan to address cumulative impacts. Relative to transportation, the determination of consistency is based on conformance to the goals and policies set forth in the Circulation Element of the General Plan.¹¹ The transportation goals in the General Plan aim to maintain a multimodal transportation system that encourages active transportation, transit use, and appropriate curb management/parking implementation. Policies relevant to the specific context of the amended DTPP area are as follows:

- *Goal BE-25:* Maintain a local transportation system that balances the needs of bicyclists, pedestrians, and public transit with those of private cars.
- *Goal BE-26:* Improve walking, bicycling, and electric bicycle/scooter facilities to be more convenient, comfortable, and safe, and therefore more common transportation modes in Redwood City.
- *Goal BE-27:* Create conditions to improve utilization of existing public transportation services to increase ridership.
- *Goal BE-28:* Provide maximum opportunities for upgrading passenger rail service for faster and more frequent trains, while making this improved service a positive asset to Redwood City that is attractive, accessible, and safe.
- *Goal BE-29:* Maintain the city’s street network to promote the safe and efficient movement of people.
- *Goal BE-31:* Encourage developments and implementation of strategies that minimize vehicle trips and vehicle miles traveled.

9.2.5 Redwood City Moves

Redwood City Moves (RWCmoves) is a Citywide Transportation Plan finalized in July 2018, intended to serve as a guiding document for the City as it seeks to improve transportation.¹² The plan is a supplement to the Circulation Element of the City’s 2010 General Plan that emphasizes the importance of improving transportation options in the City beyond automobile travel.

¹¹ City of Redwood City, 2010. Redwood City General Plan – Circulation Element, October 2021. Available at: <https://www.redwoodcity.org/home/showpublisheddocument/5099/635782756590100000>.

¹² City of Redwood City, 2018. *RWCmoves*, July 2018. Available at: http://rwcmoves.com/wp-content/uploads/2018/07/RWCmoves-Transportation-Plan_July16.pdf.

The goals of RWCmoves are:

- Eliminate traffic fatalities and severe injuries for all modes by 2030.
- Create a walking- and bicycling-friendly community that provides a safe, balanced, and convenient transportation system.
- Provide seamless connections and improved street access to all areas within the City, but especially along mixed-use corridors designated in the General Plan and Citywide Transportation Plan.
- Embrace innovation in all forms of emerging technologies, especially in ways to creatively manage congestion and the transportation system.
- Reach over 50 percent of all trips being by non-driving modes by 2040; remaining automobile trips should be shared rides and/or zero emission trips.
- Invest in projects that support a resilient, equitable, and sustainable transportation system.

The Redwood City TAM¹³ is an appendix to RWCmoves. The TAM provides a clear and consistent technical approach for evaluating projects that could have transportation effects (adverse or beneficial) on the City’s transportation system and services. For environmental analysis, the TAM outlines the required methodology and thresholds with which to evaluate VMT impacts, consistent with the latest CEQA Guidelines.

9.2.6 Redwood City Walk Bike Thrive

Redwood City Walk Bike Thrive is the Citywide Bicycle & Pedestrian Master Plan and Vision Zero Action Plan finalized in June 2022.¹⁴ Walk Bike Thrive serves as a guiding document and presents a vision and strategy for enhanced safety, walking, and bicycling in the City. Walk Bike Thrive combines the Vision Zero Plan, Pedestrian Master Plan, and Bicycle Master Plan, which were identified as critical next steps in RWCmoves. The goals in Walk Bike Thrive are the same those in RWCmoves, which are summarized above in Section 9.2.5, *Redwood City Moves*.

9.2.7 Redwood City Transportation Demand Management Ordinance

In December 2021, the City of Redwood City adopted a Transportation Demand Management (TDM) Ordinance. The TDM ordinance requires all new development in the City that meet specified development thresholds (generally 25 or more units and/or 10,000 square feet or more commercial development, including offices development) to develop a TDM plan and requires annual monitoring of specific mode share targets. Applicable mode share targets for both residential and commercial sites in the Downtown Area are no more than 33 percent of trips being drive-alone trips (i.e., single-occupancy vehicle or “SOV trips”). The TDM Ordinance provides

¹³ City of Redwood City, 2020. *Redwood City Transportation Analysis Manual*, July 21, 2020. Available at: <https://www.redwoodcity.org/home/showpublisheddocument?id=22106>.

¹⁴ City of Redwood City, 2022. *Redwood City Walk Bike Thrive*, June 2022. Available at: https://www.rwcwalkbikethrive.org/_files/ugd/06d7f0_d8e5440df8bc485da7bf731455da39bb.pdf.

financial incentives to meet specified targets. This ordinance applies to all new development, even if individual projects qualified for VMT screening or do not have a VMT impact based on City thresholds.

9.2.8 Redwood City Downtown Precise Plan (DTPP)

The DTPP was adopted by the City Council on January 24, 2011 and was amended most recently on June 11, 2018.¹⁵ The DTPP describes the vision for the future of Downtown, regulates private development, and recommends potential future City projects. Transportation Goals and Principals relevant to the specific context of the amended DTPP area are as follows:

- A:** Revive Downtown by creating a beautiful and memorable urban district interwoven with the City’s identity.
- D:** Provide the choice of “convenience living”.
- F:** Create a strong employment district and “vital center”.
- G:** Make pedestrians the priority.
- H:** Integrate transit and bicycle use.
- I:** Provide “just enough” parking and create a “park-once and walk” district.

9.3 Impacts and Mitigation Measures

9.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe transportation and circulation impacts that would result from implementation of the proposed DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR. As discussed previously at the beginning of this chapter in *Findings of the DTPP Final EIR*, due to adoption of SB 743 (see *Section 9.2.1* above), unlike the DTPP Final EIR, the analysis in this SEIR uses VMT and not intersection delay/LOS to assess these impacts. Since this is a program-level analysis, VMT for the Project is only evaluated under future year 2040 conditions, consistent with the timeframe anticipated for the build-out of future individual development projects that could occur with the DTPP Plan-Wide Amendments. Year 2040 conditions is referred to as “cumulative without Project” and “cumulative with Project” conditions, consistent with the City’s TAM. Please note, however, that these scenarios differ from the cumulative conditions scenario evaluated in Chapter 17, *Cumulative Impacts*; that analysis, consistent with the City’s TAM, employs what is known as a boundary method to evaluate citywide VMT.

The comparison of 2040 conditions without the Project to 2040 conditions with the Project appropriately isolates Project-only VMT (i.e., VMT attributable to the proposed DTPP Plan-Wide Amendments) for evaluation against the City’s VMT thresholds. Near-term (i.e., baseline)

¹⁵ City of Redwood City, 2011. *Downtown Precise Plan*, January 2011 (Last Amended June 2018). Available at: <https://www.redwoodcity.org/home/showpublisheddocument/10001/636673547793200000>.

conditions are not analyzed for this program-level analysis; future individual development projects proposed under the DTPP Plan-Wide Amendments would be required to conduct additional VMT screening and/or analysis to reflect baseline conditions, consistent with guidance provided in the City's TAM.

Proposed Land Uses

As described in detail in Chapter 3, *Project Description*, the proposed DTPP Plan-Wide Amendments would revise certain DTPP development standards, guidelines and policies. This SEIR also assumes a potential future northerly extension of the DTPP area and assumes additional office and residential development in the DTPP area. The development potential for office would represent an increase of approximately 1,167,100 square feet¹⁶ as compared to the amount of office development evaluated in the DTPP Final EIR. For residential development potential, this SEIR evaluates an increase of 830 residential units as compared to the number of residential units evaluated in the DTPP Final EIR.

There are currently retail uses in the area that are conditionally permitted, and no change is proposed to retail development potential. Replacement of existing retail space with new retail uses would not necessitate an increase in the retail development cap; and because no change in the retail cap is proposed, it is not analyzed in this Draft SEIR.

Proposed Transportation Changes

This section discusses the transportation changes to the General Plan and DTPP that would occur with implementation of the proposed DTPP Plan-Wide Amendments. These proposed changes are shown graphically in Figure 3-3 (see Chapter 3, *Project Description*).

Roadway Network

The following roadways would be vacated/closed to vehicular traffic, but in some cases would remain accessible to bicycles and pedestrians:

- One-block segment of Hamilton Street between Broadway and Marshall Street (would remain accessible to bicyclists and pedestrians);
- One-block segment of Broadway between Jefferson Avenue and Main Street (would remain accessible to bicyclists and pedestrians);
- One-block segment of Spring Street between Main Street and Walnut Street; and
- One-block segment of Winklebleck Street between California Street and James Avenue.

In addition, the following streets would be modified:

- California Street between Winklebleck Street and James Avenue would be abandoned; and
- Franklin Street between Winklebleck Street and James Avenue would be extended.

¹⁶ A portion of the office development cap (80,000 square feet) would be reserved specifically for small office projects, which are defined as those projects proposing 20,000 net new square feet or less of office space.

The proposed street closures and modifications (besides the Franklin Street extension and the Spring Street closure) were not included in the DTPP, but would generally be consistent with the circulation network that was included in the DTPP because they promote a vibrant, mixed-use downtown that prioritizes mobility by active modes like walking and bicycling. In addition, the proposed revisions to the street grid just north of James Avenue would allow for implementation of the DTPP's proposed Franklin Street extension between James Avenue and Winklebleck Street.

Pedestrian, Bicycle, and Transit Improvements

The circulation improvements proposed with DTPP Plan-Wide Amendments discussed above would also provide for adequate bicycle and pedestrian connections. The realigned street grid north of James Avenue and west of the Transit Center would create better connections to the Transit Center, allow for wider sidewalks and improved pedestrian sight lines, and provide a new four-way stop-controlled intersection. Throughout the amended DTPP area, widened sidewalks and protected pedestrian crossings would also be provided on certain designated streets. The closure of street segments to vehicular traffic, while allowing for people to walk or ride bikes, would increase safety for these people on the closed segments. These circulation improvements would be consistent with the circulation plan set forth in the DTPP.

9.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter and differ somewhat from the criteria used in the DTPP Final EIR. For this analysis, a significant impact could occur if implementation of the proposed DTPP Plan-Wide Amendments would:

- conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; (***new criterion but similar to DTPP Final EIR criteria a and e***) or
- conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (i.e., VMT impact assessment consistent with the City's TAM) (***new criterion***); or
- substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (***same criterion as DTPP Final EIR criterion c***); or
- result in inadequate emergency access (***same criterion as DTPP Final EIR criterion d***).

The main difference between the significance criteria used to evaluate transportation impacts for the proposed DTPP Plan-Wide Amendments from the significance criteria used to evaluate transportation impacts for the DTPP Final EIR is that criteria related to traffic capacity and LOS (i.e., DTPP Final EIR criteria a and b) are no longer used as measures in the determination of a transportation impact under CEQA.¹⁷ This is the direct result of implementation of SB 743 (see Section 9.2, *Regulatory Setting*) and the move from delay/capacity-based performance metrics to

¹⁷ These transportation performance metrics are still considered by the City, and are documented in the LTA prepared for the Transit District. While relevant to the City's project approval process, the analyses contained within the LTA are not required under CEQA and, therefore, are not part of this Draft SEIR.

VMT; the impact evaluation related to VMT is provided in the “new” criterion b and is consistent with CEQA Guidelines section 15064.3(b). The other minor difference is that the impact evaluation of plan consistency is now consolidated for all travel modes under one criterion, criterion a.

VMT

The City’s specific VMT impact criteria, as outlined in the TAM, are summarized below and are used to evaluate program-level impacts of the proposed DTPP Plan-Wide Amendments.

CEQA Analysis Screening Criteria

In the first step, the TAM applies specific screening criteria for projects presumed to have a less-than-significant impact, eliminating the need to conduct a VMT analysis for CEQA transportation purposes. The TAM includes detailed screening criteria related to affordable housing, small projects, local serving public facilities, neighborhood serving retail, and childcare projects, as well as projects that are in a Transit Priority Area (TPA). Each component of a mixed-use project is considered separately and each of a project’s individual land uses is compared to the screening criteria.

Project-Generated VMT Impact Criteria

Per the City’s TAM, a significant project-generated VMT impact would occur if a project meets any of the following criteria:

- **Residential land uses.** The daily project-generated VMT per service population for the residential portion of the Project is above the countywide home-based VMT per capita threshold of 10.5 miles, which is 15 percent below the countywide home-based VMT of 12.3 miles.
- **Office land uses.** The daily project-generated VMT per service population for the office portion of the Project is above the countywide home-based work VMT per employee threshold of 15.0 miles, which is 15 percent below the countywide home-based work VMT per employee of 17.6 miles.
- **Retail land uses.** The daily project-generated VMT per service population for the retail, entertainment, and childcare portions of a project is above the countywide total VMT per service population threshold of 32.0 miles, i.e., no change from countywide VMT per service population.

The VMT criteria described above were selected by the City to be consistent with OPR’s Technical Advisory (see *Section 9.2.1*, above), which are tied to the State’s GHG reduction goals.

For mixed-use development, each individual land use component must be evaluated independently, taking credit for internal capture, and applying the significance criteria for each land use type. The VMT estimates for the proposed DTPP Plan-Wide Amendments assumes additional office development and residential units. These estimates were compared to this threshold to evaluate impacts of the proposed amendments. Project-generated VMT below this local threshold indicates that a project is not likely to rely on vehicle travel as much as other developments in the City.

Project Effects on VMT Impact Criterion

Per the City's TAM, a significant VMT impact would also occur if the City's per capita VMT under cumulative conditions (Year 2040) applying the boundary method would increase with the project.

Pedestrian and Bicycle Facilities

RWCmoves, the San Mateo County CBPP, and Walk, Bike, Thrive describe related policies and programs necessary to ensure pedestrian and bicycle facilities are safe and effective for City residents. Using these plans as a guide, significant impacts to these facilities would occur if the proposed DTPP Plan-Wide Amendments meets any of the following criteria:

- Creates a hazardous condition that does not currently exist for pedestrians and bicyclists, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Redwood City, San Mateo County, or Caltrans for their respective facilities in the study area.

Safety and Hazards

The proposed DTPP Plan-Wide Amendments would cause a significant impact related to safety and hazards if it would increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses. Applicable design standards for the proposed DTPP Plan-Wide Amendments are those contained within the DTPP, the RWCmoves street typologies, and the Street Design Criteria included in the City's 2019 Engineering Standards, all of which include design specifications to ensure safe and efficient travel of vehicles, bicycles, pedestrians, and transit vehicles. Using these plans as a guide, significant impacts related to safety and hazards would occur if development within the amended DTPP area would conflict with policies related to street design adopted by the City.

Emergency Access

An emergency access impact is considered significant if implementation of the proposed DTPP Plan-Wide Amendments would result in inadequate access to accommodate emergency vehicles. Specifically, the assessment should determine if a project has the potential to impact emergency vehicle access by creating conditions that would substantially affect the ability of drivers to yield the right-of-way to emergency vehicles or preclude the ability of emergency vehicles to access streets within the study area.

9.3.3 Impacts and Mitigation Measures

Given the amendments to CEQA requiring use of VMT rather than LOS, transportation impacts of the proposed DTPP Plan-Wide Amendments would be less severe than those identified in the DTPP Final EIR. Specific impacts are analyzed below.

Impact TR-1: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. (*Less than Significant*)

DTPP Impact Summary

As noted earlier, the DTPP Final EIR identified a number of significant impacts related to intersection and freeway operations. The significant intersection impacts were identified at seven study intersections during the PM peak hour within the amended DTPP area, and significant freeway segment impacts were identified for four segments on US 101.

The DTPP Final EIR identified mitigation measures (Mitigation Measures 9-1 through 9-7) to address the intersection impacts; however, only one of the study intersections where a significant impact was identified would be mitigated to a less-than-significant-level. For the remaining six study intersections, a significant and unavoidable impact was identified due to the fact that the mitigation measures identified for those intersections would require approvals from an agency (Caltrans) other than the Lead Agency (Redwood City) that could not be guaranteed. Similarly, Redwood City's lack of authority to independently implement the mitigation measure identified (Mitigation Measure 9-8) to address significant impacts on the four study freeway segments also lead to a significant and unavoidable impact determination.

The significant intersection and freeway segment impacts listed above were determined using the performance metric of delay/LOS. As noted under Section 9.2, *Regulatory Setting*, SB 743 and the resulting change to the CEQA Guidelines in section 15064.3, subdivision (b), vehicle LOS can no longer be used as a determinant of significant environmental impacts. VMT is now used as the primary performance metric to establish the significance of a transportation impact, and that impact analysis is provided under Impact TR-2 below.

The DTPP Final EIR also identified a significant impact to transit. This significant impact relates to additional transit demand that would be generated by development in the amended DTPP area, and whether existing and planned transit service would be adequate to serve this increased demand. Mitigation Measure 9-9 was identified to address this significant impact, requiring coordination between the City and all relevant transit service providers to facilitate expanded transit services to match increased demand in the amended DTPP area. However, because of uncertainty related to the timing and execution of service enhancements planned by existing and future transit service providers in the amended DTPP area (e.g., California High Speed Rail Authority, Caltrain, SamTrans, etc.), the DTPP Final EIR identified a significant and unavoidable transit service impact.

The DTPP Final EIR did not identify any significant impacts related to bicycle or pedestrian facilities.

Project Impacts

This section discusses the proposed DTPP Plan-Wide Amendments' conformance with the City's General Plan, as well as relevant pedestrian, bikeway, traffic calming, or regional transit plans.

Redwood City General Plan

The proposed DTPP Plan-Wide Amendments is consistent with the General Plan transportation goals making circulation improvements to promote high-quality vehicular, bicycle, and pedestrian connections in the amended DTPP area. Specifically, the proposed DTPP Plan-Wide Amendments propose to lower parking ratios, incentivize shared parking, increase bicycle parking, and improve multimodal access within the amended DTPP area by implementing new and/or enhanced bicycle, pedestrian and transit facilities. These elements would support the City’s goal to increase multimodal access, and are consistent with the City’s General Plan goals. A consistency determination for each relevant General Plan transportation goal is provided below in **Table 9-2**.

**TABLE 9-2
GENERAL PLAN TRANSPORTATION GOALS**

Transportation Goals		Project Consistency
Goal BE-25	Maintain a local transportation system that balances the needs of bicyclists, pedestrians, and public transit with those of private cars.	The proposed DTPP Plan-Wide Amendments objectives include making circulation improvements to ensure adequate vehicular, bicycle and pedestrian connections.
Goal BE-26	Improve walking, bicycling, and electric bicycle/scooter facilities to be more convenient, comfortable, and safe, and therefore more common transportation modes in Redwood City	The proposed improvements, such as requiring protected bike lanes, would be consistent with Walk Bike Thrive and would enhance safety and convenience for active transportation within the amended DTPP area.
Goal BE-27	Create conditions to improve utilization of existing public transportation services to increase ridership.	The proposed DTPP Plan-Wide Amendments would require improvements to bus loading along El Camino Real.
Goal BE-28	Provide maximum opportunities for upgrading passenger rail service for faster and more frequent trains, while making this improved service a positive asset to Redwood City that is attractive, accessible, and safe.	While the proposed DTPP Plan-Wide Amendments would not directly provide opportunities for upgrading passenger rail service, it would provide for the land-use mix and development density to support passenger rail service.
Goal BE-29	Maintain the city’s street network to promote the safe and efficient movement of people.	See project consistency example for Goal BE-25.
Goal BE-31	Encourage developments and implementation of strategies that minimize vehicle trips and vehicle miles traveled.	The amended DTPP area’s location within the downtown and directly adjacent to the Redwood City Transit Center minimizes vehicle trips and vehicle miles traveled (see Impact TR-2).

SOURCES: Redwood City General Plan, 2010; Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

Redwood City Downtown Precise Plan (DTPP)

The proposed DTPP Plan-Wide Amendments would not conflict with any of the overarching transportation goals of the DTPP, as it prioritizes pedestrians and creates additional office space and residential units for a vibrant mixed-use downtown. The proposed DTPP Plan-Wide Amendments would alter parking requirements in order to better align with the “just enough” principle. A consistency determination for each relevant DTPP goal and guiding principle is provided below in **Table 9-3**.

**TABLE 9-3
DTPP GOALS AND GUIDING PRINCIPLES**

Transportation Goals and Principles		Project Consistency
A	Revive Downtown by creating a beautiful and memorable urban district interwoven with the City's identity.	The proposed DTPP Plan-Wide Amendments will enhance the amended DTPP area's small grid network that allows for safe and efficient movement of people, encouraging non-motorized modes of travel. The proposed DTPP Plan-Wide Amendments would also include a mix of office and residential land uses to promote walkable / bikeable / transit trips.
D	Provide the choice of "convenience living".	The proposed DTPP Plan-Wide Amendments would increase the number of people who could live downtown, which provides convenient access to the Redwood City Transit Center, offering access to the Peninsula, and city and regional services amid a mixed-use, walkable environment.
F	Create a strong employment district and "vital center".	The Proposed DTPP Plan-Wide Amendments will allow for an additional 1,167,100 square feet of office development and will anchor a vibrant downtown area.
G	Make pedestrians the priority.	See project consistency example for Goal A.
H	Integrate transit and bicycle use.	The proposed DTPP Plan-wide Amendments would allow for enhanced pedestrian and bicycle facilities to increase safety and improve connectivity to and from Redwood City Transit Center.
I	Provide "just enough" parking and create a "park-once and walk" district.	The proposed DTPP Plan-Wide Amendments would revise certain DTPP Parking Regulations to lower the parking requirement to provide for "just enough" parking and create a "park-once and walk" district while continuing to incentivize shared parking and the ability for project applicants to pay a fee to the City in lieu of providing new parking spaces. The Amendments would also increase bicycle parking.

SOURCES: Redwood City Downtown Precise Plan, 2018; Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

RWCmoves and Walk Bike Thrive

The proposed DTPP Plan-Wide Amendments would not conflict with any of the RWCmoves or Walk Bike Thrive transportation goals because it prioritizes pedestrian and bicycle activity by requiring pedestrian and bicycle enhancements consistent with other adopted plans and policies. Additionally, it would increase the density of infill development, which would reduce the need for vehicle trips. A consistency determination for each relevant RWCmoves transportation goal is provided below in **Table 9-4**.

TDM Ordinance

Compliance with the City's TDM ordinance, which is described above in Section 9.2, Regulatory Setting, would be required for individual subsequent development projects allowed under the proposed Plan-Wide Amendments. Many of the proposed Plan-Wide Amendments reflect elements that would reduce single-occupancy vehicle trips and compliment the City's TDM Ordinance goals to reduce single-occupancy vehicle trips. Specifically, the proposed DTPP Plan-Wide Amendments would concentrate jobs and housing within walking distance of several major transit stops, would lower parking ratios, incentivize shared parking, increase bicycle parking, and improve multimodal access within the amended DTPP area by implementing new and/or enhanced bicycle, pedestrian, and transit facilities. These elements would support the City's goal to increase multimodal access and reduce single-occupancy vehicle trips.

**TABLE 9-4
RWC MOVES AND WALK BIKE THRIVE GOALS**

Transportation Goals		Project Consistency
Goal 1	Eliminate traffic fatalities and severe injuries for all modes by 2030.	The proposed DTPP Plan-Wide Amendments would enhance the amended DTPP area's small grid network that allows for safe movement of people and discourages speeding and other hazardous vehicle movements.
Goal 2	Create a walking and bicycling-friendly community that provides a safe, balanced, and convenient transportation system.	The proposed DTPP Plan-Wide Amendments' enhanced small grid network and realigned street grid would create better connections to the Redwood City Transit Center, allow for wider sidewalks and improved pedestrian sight lines, and provide a new four-way stop-controlled intersection.
Goal 3	Provide seamless connections and improved street access to all areas within the City, but especially along mixed-use corridors designated in the General Plan and Citywide Transportation Plan.	See project consistency examples for Goals 1 and 2.
Goal 4	Embrace innovation in all forms of emerging technologies, especially in ways to creatively manage congestion and the transportation system.	The proposed DTPP Plan-Wide Amendments would revise certain DTPP Parking Regulations to lower the parking requirement to provide for "just enough" parking and create a "park-once and walk" district while continuing to incentivize shared parking and the ability for project applicants to pay a fee to the City in lieu of providing new parking spaces.
Goal 5	Reach over 50% of all trips being by non-driving modes by 2040; remaining automobile trips should be shared rides and/ or zero emission trips.	The amended DTPP area's location within the downtown and directly adjacent to the Redwood City Transit Center minimizes vehicle trips and vehicle miles traveled (see Impact TR-2). Reduced parking ratios, required TDM measures, and increased bicycle parking will encourage trips to shift from driving alone to active modes.
Goal 6	Invest in projects that support a resilient, equitable and sustainable transportation system.	The proposed DTPP Plan-Wide Amendments would allow for improvements for non-vehicle modes of transportation and the amended DTPP area is located near the Redwood City Transit Center, which promotes transit use.

SOURCES: RWCmoves, 2018; Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

Transit Demand

OPR has opined that a project that increases transit ridership is not considered to result in a significant adverse environmental impact. The Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) states that:

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

Therefore, while the proposed DTPP Plan-Wide Amendments would result in increases in office and residential populations that could increase demand for transit services, these increases would not result in a significant impact.

Conclusion

As discussed above, the proposed DTPP Plan-Wide Amendments would be consistent with and promote General Plan, DTPP policies, and RWCmoves goals for the amended DTPP area, resulting in a less-than-significant impact. Mitigation measures identified in the DTPP Final EIR to address intersection and freeway segment operations impacts (Mitigation Measures 9-1 through 9-8) *would not be applicable* to the proposed DTPP Plan-Wide Amendments due to the change in performance metrics used to determine a significant transportation impact, as required by SB 743 and CEQA Guidelines section 15064.3(b). Also, based on guidance published by OPR in 2018, adding transit ridership is no longer considered a significant adverse environmental impact, and therefore the transit-related mitigation measure identified in the DTPP Final EIR (Mitigation Measure 9-9) *would not be applicable* to the proposed DTPP Plan-Wide Amendments.

In summary, based on the analysis presented above, implementation of the proposed DTPP Plan-Wide Amendments would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed DTPP Plan-Wide Amendments would not result in new or more severe circulation-related impacts than the impacts identified in the DTPP Final EIR. Therefore, the impact would be *less than significant* and no mitigation measures would be required.

Mitigation: None required.

Impact TR-2: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (*Less than Significant*)

DTPP Impact Summary

As discussed above in Section 9.3.2, *Significance Criteria*, this significance criterion was not evaluated in the DTPP Final EIR. This criterion is the direct result of implementation of SB 743 (see Section 9.2, *Regulatory Setting*) and the move from delay/capacity-based performance metrics to VMT, which occurred after certification of the DTPP Final EIR.

Project Impacts

The following summarizes the VMT impact methodology, analysis, and determination; travel demand modeling assumptions and adjustments used to calculate baseline and project VMT are documented in the Transportation Analysis conducted for the proposed DTPP Plan-Wide Amendments (see Appendix C).

VMT Screening

In the first step of the VMT evaluation, the proposed Plan-Wide Amendments components were evaluated against the City's screening criteria. Land use projects that meet the City's screening criteria summarized above in Section 9.3.2, *Significance Criteria*, are presumed to result in a less-

than-significant VMT impact and do not require further analysis. While some land use developments within the amended DTPP area would likely meet the screening criteria (e.g., affordable housing, location in a TPA, locally-serving public facilities), others may not. Furthermore, this SEIR assumes that the proposed DTPP Plan-Wide Amendments would indirectly result in development in excess of the 500,000 square foot size limit for projects within a TPA. Therefore, as specified in the TAM, the proposed DTPP Plan-Wide Amendments is not eligible for VMT screening, and a full VMT analysis was conducted using the VTA-C/CAG model.

Trip Generation

Trip generation refers to the amount of travel activity associated with a change in land use at a given location. The C/CAG-VTA model was used to estimate daily vehicle trips for the purposes of this SEIR. This represents a conservative approach, since the C/CAG-VTA model uses industry standard/generic trip generation characteristics for the different land uses to estimate vehicle trips. Trip generation studies conducted as part of RWCmoves show that Redwood City's rates are typically lower than standard industry rates. Furthermore, because the C/CAG-VTA model does not have a specific land use input to represent R&D Laboratory space which, as stated in Chapter 3, *Project Description*, could be permitted as a conditional use with implementation of the DTPP Plan-Wide Amendments, the modeling conducted for this analysis represents all potential office development as having the same trip generation characteristics. From a trip generation perspective, this represents a conservative approach because R&D Laboratory space would typically have fewer employees per square foot as compared to a general office use due to the need to accommodate equipment and materials storage needs associated with laboratory space. Additional detail on assumptions used to adjust and run the C/CAG-VTA model to reflect development that could occur under the proposed DTPP Plan-Wide Amendments is provided in Appendix C.

The proposed DTPP Plan-Wide Amendments' land uses were allocated to Transportation Analysis Zones (TAZ)¹⁸ 2015, which approximates the boundaries of the amended DTPP area. The City model adjusts the trip generation to account for internalization, or the trips among uses within the amended DTPP area that are not expected to leave the amended DTPP area. Therefore, the trip generation is reported for the entire Project and is not broken down by specific land use. **Table 9-5** shows the total number of average weekday daily vehicle trips as a result of implementation of the proposed DTPP Plan-Wide Amendments based on an analysis of future conditions with and without the Project. The proposed DTPP Plan-Wide Amendments would generate approximately 13,300 total net new daily vehicle trips at full buildout.¹⁹

¹⁸ A TAZ is a geographic areas used in travel demand forecasting models. TAZ boundaries are usually major roadways and/or jurisdictional borders that generally have homogenous land use characteristics.

¹⁹ For comparison purposes, trip generation rates from the industry standard Institute of Transportation Engineers (ITE) Trip Generation Manual were applied to the proposed land use types and quantities. Using ITE's average daily rates of 10.84 trips per thousand square feet of office development and 4.72 trips per housing unit, the proposed DTPP Plan-Wide Amendments would generate approximately 16,568 daily vehicle trips (12,650 for office, 4,918 for residential). In comparison to the C/CAG-VTA modeled average daily vehicle trips shown above in Table 9-5, the estimated trip generation using ITE's rates is about 19 percent higher; The ITE estimates are higher because the ITE trip generation estimates, unlike the C/CAG-VTA trip generation estimates, are unadjusted and do not take into account vehicle trip efficiencies that are a function of the presence/proximity of complementary land uses and the mode shift to non-vehicle travel modes (i.e., walking, bicycling, transit) that occurs in a dense downtown area in proximity to transit.

**TABLE 9-5
AVERAGE WEEKDAY VEHICLE TRIPS**

	Cumulative No Project	Cumulative + Project	Net New Project Trips
Daily	46,700	60,000	13,300

NOTE: Trip generation estimates rounded to nearest 100.

SOURCE: Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

Residential and Office VMT

The VMT estimate for all residential vehicle trips generated by the proposed DTPP Plan-Wide Amendments with an origin or destination within the amended DTPP area were divided by the number of residents in TAZ 2015 to obtain VMT per capita. The results were compared to the City's VMT threshold for residential projects.²⁰ Similarly, the VMT estimate for all Project-related office-generated vehicle trips with an origin or destination within the amended DTPP area were divided by the number of employees in TAZ 2015 to obtain VMT per employee. The initial results for the residential and office components of the proposed DTPP Plan-Wide Amendments are summarized in **Table 9-6**.

**TABLE 9-6
INITIAL RESIDENTIAL AND OFFICE VMT ANALYSIS RESULTS**

Scenario	VMT
Residential Project Components	
Existing	9.7
Cumulative No Project	8.5
Cumulative Plus Project	8.2
Office (General Employment) Project Components	
Existing	17.0
Cumulative No Project	17.3
Cumulative Plus Project	15.8

SOURCE: Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

TDM Ordinance

As noted previously, the C/CAG-VTA travel model does not fully account for the City's TDM Ordinance. The C/CAG-VTA model estimates a single-occupancy vehicle rate of 48 percent for the proposed Plan-Wide Amendments, which is 15 percentage points greater than the 33 percent required per the City's TDM Ordinance. The VMT results from the C/CAG-VTA model shown in Table 9-6 were, therefore, adjusted to account for the effects of the City's TDM Ordinance, using vehicle trip reductions that have been quantified by the California Air Pollution Control

²⁰ The VMT thresholds for both residential and office projects are provided in the TAM (July 21, 2020). Available at: <https://www.redwoodcity.org/home/showpublisheddocument/22106/637311118467370000>. Accessed April 27, 2022.

Officers Association (CAPCOA).²¹ Based on the CAPCOA guidance, vehicle trips could be reduced by up to 26 percent with implementation of mandatory TDM programs that include monitoring requirements. Individual measures such as providing end-of-trip bicycle facilities and implementing marketing strategies to promote commute reduction programs, would reduce trips by up to approximately 4 percent each. More cost intensive individual TDM measures such as employee parking cash-out or providing employer-sponsored vanpool could reduce VMT by up to 12 and 20 percent, respectively. For residential projects, CAPCOA also includes reductions for affordable housing and limiting parking supply, which could reduce VMT by up to approximately 29 and 13 percent, respectively. Thus, there is great variability in TDM effectiveness depending on which measures are implemented and how complementary they are to each other. Further detail on specific TDM measures and their vehicle trip reduction potential, as quantified by CAPCOA, is provided in Appendix C.

While the City's TDM Ordinance is mandatory, each building tenant in future development allowed by the DTPP Plan-Wide Amendments would implement their own mix of TDM measures. For the purpose of the VMT analysis in this Draft SEIR, TDM reductions from those measures that are most commonly implemented were assumed, and TDM reductions were not assumed for measures that have greater time and money investment requirements, such as an employer-provided shuttle service. These assumptions led to a modest 6-percent reduction in single-occupancy vehicle trips, which is reasonable and conservative (i.e., low) based on the effectiveness of the TDM strategies quantified by CAPCOA and likely to be implemented by projects that could be developed in the amended DTPP area, particularly when accounting for strategies inherent to the DTPP Plan-Wide Amendments such as proximity to transit, a limited parking supply, and bicycle and pedestrian improvements. With the 6-percent reduction, the SOV rate for the proposed DTPP Plan-Wide Amendments would be approximately 45 percent.²² Since the projects developed under the Plan-wide Amendments would need to include additional TDM measures beyond those analyzed in this Draft SEIR to meet the TDM Ordinance target of no more than 33 percent drive-alone trips, the VMT analysis represents a conservative analysis and does not capture the full TDM commitments required under the City's TDM Ordinance.

The VMT results with the City's TDM Ordinance were compared to the City's respective VMT threshold for residential and office projects to determine if the proposed Plan-Wide Amendments would result in VMT impacts. The adjusted VMT results, which reflect the assumed 6-percent reduction in single-occupancy vehicle trips associated with the City's TDM Ordinance for the residential and office components of the proposed DTPP Plan-Wide Amendments, are summarized in **Table 9-7**.

²¹ California Air Pollution Control Officers Association, 2021. *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, December 2021. Available at: https://www.calemod.com/documents/handbook/full_handbook.pdf.

²² The 6-percent TDM reduction was applied to the calculated vehicle trip generation for the land uses assumed in the Draft SEIR. The vehicle trips minus the TDM reduction were used to re-calculate the SOV rate, which was reduced from 48 percent without the TDM reduction to 45 percent with the TDM reduction.

**TABLE 9-7
RESIDENTIAL AND OFFICE VMT ANALYSIS RESULTS WITH CITY'S TDM ORDINANCE**

Scenario	VMT	VMT Threshold	Exceed VMT Threshold?
Residential Project Components			
Cumulative Plus Project including TDM Ordinance	7.8	10.5 VMT per capita	No
Office (General Employment) Project Components			
Cumulative Plus Project including TDM Ordinance	14.9	15.0 VMT per employee	No

SOURCE: Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

As shown in Table 9-7, with the 6 percent reduction for both the residential and office development to account for the TDM Ordinance, the proposed Plan-Wide Amendments would not exceed the City's VMT thresholds and, therefore, would result in a less-than-significant VMT impact for both the residential and office components.

While the proposed DTPP Plan-Wide Amendments would allow over 1.1 million square feet of office uses and 830 residential units, the VMT per resident/employee would decrease due to the increase in infill development and proximity to and improved connectivity with the Redwood City Transit Center, which would encourage shorter trip lengths and more trips via transit. For example, a hypothetical office project that has 150 employees and is located in an area with limited transit accessibility would result in most employees driving; thus, each employee would generate two vehicle trips (one inbound trip to the office and one outbound trip back home). If the average employee commute trip length is 10 miles roundtrip, then this hypothetical office project would generate 1,500 total VMT (150 driving employees x 10-mile roundtrip = 1,500 miles) or 10.0 VMT per employee (1,500 miles divided by 150 total employees). If this same hypothetical office project were to be located instead in an area with a high level of transit accessibility, and we assume that one-third of employees would now choose to use transit, then only 100 employees would drive. In this scenario, the hypothetical office project would generate 1,000 total VMT (100 driving employees x 10-mile roundtrip = 1,000 miles) or 6.7 VMT per employee (1,000 miles divided by 150 total employees). Thus, the proximity to transit can reduce VMT per service population compared to projects that are in more suburban settings with limited commute options; in this hypothetical example, VMT was reduced from 10.0 VMT per employee to 6.7 VMT per employee. Please note that this is a hypothetical example for discussion purposes only to demonstrate how access to transit can affect VMT.

Future Development Projects

As noted previously, future development projects proposed under the proposed DTPP Plan-Wide Amendments would be required to conduct baseline VMT screening/analysis consistent with guidance provided in the City's TAM to determine if additional VMT analysis and/or a VMT-reducing TDM plan is required.

The TAM specifies that projects that are consistent the General Plan and any applicable Specific Plans would be able to apply specified VMT screening criteria. Since cumulative VMT analysis

for the DTPP Plan-Wide Amendments has already been conducted for this Project, future development projects that are consistent with the DTPP Plan-Wide Amendments can apply the City's screening criteria from the TAM for their baseline VMT analysis, as follows:

- *Transit Priority Areas (TPA)*: This criterion only applies to projects located within a one-half-mile walkshed around major transit stops (i.e., the Redwood City Transit Center) or within a one-quarter-mile walkshed around high-quality transit corridors (i.e., El Camino Real) in Redwood City. TPA screening will only apply if the project meets the following additional criteria:
 - Floor Area Ratio (FAR) of 0.75 or more; and
 - Total square footage of 500,000 square feet or less; and
 - Proposed parking does not exceed minimum required by the Zoning Code or applicable plan; and
 - Project is consistent with Sustainable Communities Strategy (as determined by the lead agency, with input from MTC); and
 - Existing on-site affordable residential units are maintained or increased; and
 - Less than significant levels of VMT are anticipated through project-specific or location-specific information (i.e., based on the City's discretion a project is not anticipated to have characteristics that would result in VMT that is substantially different from similar and/or surrounding land uses).
- *Affordable Housing*: This criterion applies to 100-percent restricted affordable residential projects in infill locations (i.e., developments within unused and underutilized lands within existing development patterns) and near transit (i.e., located within one-half-mile of a transit stop).
- *Small Projects*: This criterion applies to projects defined as generating 150 or fewer average daily vehicle trips, absent substantial evidence indicating that a project would generate a potentially significant level of VMT. Each project is required to document trip generation methodology and the number of vehicle trips that it would generate.

Future development projects that meet at least one of the screening criteria identified above would require no further VMT analysis. Future development projects that do not meet at least one of the screening criteria identified above would be required to conduct a VMT analysis using the C/CAG-VTA Model or the C/CAG VMT Estimation Tool²³ to determine if VMT generated by the project is below the City's applicable threshold. Projects that are below the threshold would require no further VMT analysis or mitigation. Projects that exceed the City's VMT threshold would be required to develop a TDM plan consistent with City's TDM Ordinance (Chapter 48 of the Redwood City Municipal Code),²⁴ and demonstrate that the proposed TDM plan reduces the

²³ https://apps.fehrandpeers.com/CCAG_VMT_Estimation_Tool/

²⁴ The City's current TDM Ordinance requires all new development in the City that meet specified development thresholds (generally 25 or more housing units and/or 10,000 square feet or more commercial development, including office developments) to develop a TDM plan and achieve specific mode share targets regardless of VMT impact. Applicable mode share targets for residential sites are no more than 33 percent of trips being drive-alone trips (i.e., single-occupancy vehicle or "SOV trips") in the downtown area and no more than 44 percent of trips being drive-alone for sites outside of the downtown. The TDM Ordinance requires individual projects to annually monitor their site for compliance and includes financial penalties for projects that fail to meet specified drive-alone targets.

project's VMT below the City's threshold. The City's current TDM Ordinance focuses on achieving mode share goals and not VMT targets. To demonstrate the effectiveness of a project's TDM plan to reduce VMT, the TDM plan for projects that do not meet the screening criteria and exceed the City's VMT threshold shall quantify the VMT effectiveness of the TDM plan by including data and reduction calculations from the latest CAPCOA guidance. Quantifying the CAPCOA reductions could be achieved through manual application of the CAPCOA guidance or the C/CAG VMT Estimation Tool once the Tool has been updated to reflect the most current version of the CAPCOA guidance (the current VMT reductions in the C/CAG VMT Estimation Tool are based on outdated 2010 CAPCOA guidance).

Roadway Network Changes

The proposed DTPP Plan-Wide Amendments includes roadway segment closures, abandonments, or extensions on five roadway segments within the amended DTPP area, which are described above in Section 9.3.1, *Scope of Analysis*. The proposed roadway network changes are short (less than 330 feet) and would not result in any noticeable change in VMT, since the amended DTPP area generally has a grid network that allows for efficient circulation. Parallel facilities are available throughout the amended DTPP area. Since the amended DTPP area generally has a grid network, there are easily accessible alternate routes for vehicle travel, and on balance the network changes are small and would not substantially increase VMT in the area, the proposed DTPP Plan-Wide Amendments are considered to have a less-than-significant roadway network change impact.

Grade Separations and VMT

As discussed above in Section 9.3.4, *Transit Service*, separate from the project being evaluated in this SEIR, the Redwood City Transit Center is anticipated to be relocated to the north of the existing location to provide space for an enlarged four-track Caltrain station. As part of this effort, the City, in partnership with Caltrain, SamTrans, and the San Mateo County Transportation Authority, is studying the feasibility of separating all existing at-grade crossings in Redwood City. The six at-grade crossings are located at Whipple Avenue, Brewster Avenue, Broadway, Maple Street, Main Street, and Chestnut Street. The goal of the grade separation study is to evaluate alternatives to address the current challenges of Caltrain at-grade crossings and to separate the railroad from the roadway. The City has not selected a preferred alternative, but it is considering the following two options: a) grade-separate all crossings, with bicycle and pedestrian access only on Maple Street and either full access or bicycle and pedestrian access only on Chestnut Street; and b) grade-separate the northern crossings only, leaving the southern crossings at-grade. The impact of these potential grade crossings on VMT are included as part of the cumulative analysis for Transportation and Circulation, which is discussed in Chapter 17, *Cumulative Impacts*.²⁵

Conclusion

As discussed above, new vehicle trips generated by the proposed DTPP Plan-Wide Amendments would not result in VMT that would exceed the VMT thresholds established by the City.

²⁵ Pursuant to Public Resource Code 21080.13, grade separations would be statutorily exempt from CEQA.

Furthermore, the effect of roadway network changes proposed by the Plan-Wide Amendments was found to not have a substantial effect on VMT. Since there was no requirement to evaluate a project's VMT impacts on transportation at the time the DTPP Final EIR was approved, a comparison of the proposed DTPP Plan-Wide Amendments to the DTPP Final EIR cannot be made.

Therefore, implementation of the proposed DTPP Plan-Wide Amendments would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). The proposed DTPP Plan-Wide Amendments would not result in new significant VMT impacts. The impact would be *less than significant* and no mitigation measures would be required.

Mitigation: None required.

Impact TR-3: Implementation of the proposed DTPP Plan-Wide Amendments would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (*Less than Significant*)

The DTPP Final EIR found that impacts related to the introduction/worsening of hazards or incompatible uses would be less than significant. While conceptual street network changes are proposed as part of the proposed DTPP Plan-Wide Amendments, subsequent projects that would include such changes have not advanced to the stage of developing detailed street designs. As they do, any roadway extensions and new streets would need to comply with the DTPP, RWCmoves and the Street Design Criteria included in the City's Engineering Standards, all of which include design specifications to ensure safe and efficient travel of vehicles, bicycles, pedestrians, and transit vehicles. Additionally, construction of subsequent development projects, including any utility upgrades that may be necessary to serve such projects, would be subject to standard conditions of approval (COAs) relating to project construction. Standard COAs would require implementation of an approved traffic control plan during construction activities, in accordance with the Work Area Traffic Control Handbook. The traffic control plan would identify traffic control methods and plans for flagging; provide notification to affected landowners, residents, and emergency service providers; and provide appropriate warning signs. In this way, potential hazards to pedestrians and bicyclists would be avoided. Therefore, the proposed DTPP Plan-Wide Amendments would not introduce any geometric design features or incompatible uses, nor would it cause temporary disruptions in street operations, and therefore would not result in a new or more severe impact related to traffic hazards than the impact identified in the DTPP Final EIR. This impact would be *less than significant*.

Mitigation: None required.

Impact TR-4: Implementation of the proposed DTPP Plan-Wide Amendments would not result in inadequate emergency access. (*Less than Significant*)

The transportation analysis in the DTPP Final EIR found that impacts related to emergency access would be less than significant. However, the DTPP Final EIR also addressed emergency response and evacuation impacts in Chapter 8, *Public Services*, concluding that there would be a potentially significant impact and imposing mitigation to require the City to implement signal prioritization for emergency response vehicles. Due to changes to the CEQA Guidelines since certification of the DTPP Final EIR, this impact discussion and mitigation is provided in Chapter 14, *Hazards and Hazardous Materials* of this SEIR and the analysis presented below is focused only on whether street network changes proposed by the DTPP Plan-Wide Amendments would impede emergency vehicle access.

Efficient operations of City streets help to reduce response times for emergency responders including the Redwood City Police and Fire Department personnel, as well as private ambulance services. An emergency access assessment was conducted to determine if the proposed DTPP Plan-Wide Amendments has the potential to impede emergency vehicle access by creating conditions that would substantially affect the ability of drivers to yield the right-of-way to emergency vehicles or preclude the ability of emergency vehicles to access streets located within the amended DTPP area.

Any roadway extensions, such as Franklin Street between Winklebleck Street and James Avenue, would need to comply with the Street Design Criteria included in the City's Engineering Standards, as well as relevant sections from RWCmoves, which include design specifications that consider emergency vehicle access requirements. All new street segments would be designed in accordance with City policies and provide adequate emergency vehicle access and would not impede emergency vehicle access to the amended DTPP area and surrounding area by emergency vehicles. The Fire Department and other relevant City departments would review the final design and on-site circulation, once completed, to ensure that there is adequate emergency access.

The proposed DTPP Plan-Wide Amendments also incorporates standards for the closed street segments, with respect to such features as lane width, lighting, paving, and emergency access requirements. The proposed Spring Street closure between Main Street and Walnut Street is a frequently used route by vehicles leaving the fire station located on Marshall Street, just north of Main Street. With Spring Street closed, in order to travel south on Broadway, fire response vehicles would likely take Main Street to Broadway, which is a distance of approximately 1,200 feet, compared to 1,000 feet without the closure. Similarly, proposed closures on Broadway and Hamilton Street would not impede emergency vehicle access because there are alternative routes to avoid these closures that would allow emergency vehicles to efficiently circulate in the DTPP area. In other words, the City's grid network allows for reasonable alternative routes in locations where street segments are proposed to be closed to vehicular access. Emergency responders would continue to have access to those roadway segments that are closed to private vehicles. The proposed street closures would not substantially affect the ability of drivers to yield the right-of-way to emergency vehicles or preclude the ability of emergency vehicles to access streets within the amended DTPP area.

Furthermore, any potential disruptions to emergency access resulting from the construction of any of the roadway modifications described above, and of subsequent development projects, including any required utility improvements that might be necessary to serve such projects, would be minimized through the implementation of standard conditions of approval (COAs) relating to project construction. Standard COAs would require implementation of an approved traffic control plan during construction activities, in accordance with the Work Area Traffic Control Handbook. The traffic control plan would identify traffic control methods and plans for flagging; provide notification to affected landowners, residents, and emergency service providers; and provide appropriate warning signs.

In summary, the proposed roadway closures, abandonments, and extensions provide for a grid network that would not substantially affect the ability of drivers to yield the right-of-way to emergency vehicles or preclude the ability of emergency vehicles to access streets within the amended DTPP area. Construction activities associated with these proposed roadway modifications would be required to conform to standard COAs that would minimize any potential disruptions to emergency access. The proposed DTPP Plan-Wide Amendments would not result in a new or more severe impact related to emergency access than the impact identified in the final EIR. Therefore, the impact would be *less than significant*.

Mitigation: None required.

9.4 References

- California Air Pollution Control Officers Association, 2021. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, December 2021. Available at: https://www.caleemod.com/documents/handbook/full_handbook.pdf.
- Caltrain, 2019. *Caltrain 2019 Annual Passenger County – Key Findings*, 2019. Available at: <https://www.caltrain.com/Assets/Stats+and+Reports/2019+Annual+Key+Findings+Report.pdf>.
- City/County Association of Governments of San Mateo County, 2021. *2021 C/CAG San Mateo County Comprehensive Bicycle and Pedestrian Plan*, June 2021. Available at <https://ccag.ca.gov/wp-content/uploads/2021/06/San-Mateo-County-Comprehensive-Bicycle-and-Pedestrian-Plan-Update-Final-Plan.pdf>.
- City of Redwood City, 2022. *Redwood City Walk Bike Thrive*, June 2022. Available at https://www.rwcwalkbikethrive.org/_files/ugd/06d7f0_d8e5440df8bc485da7bf731455da39bb.pdf.
- City of Redwood City, 2020. *Redwood City Transportation Analysis Manual*, July 21, 2020. Available at: <https://www.redwoodcity.org/home/showpublisheddocument?id=22106>.
- City of Redwood City, 2018. *RWCmoves*, July 2018. Available at: http://rwcmoves.com/wp-content/uploads/2018/07/RWCmoves-Transportation-Plan_July16.pdf.

City of Redwood City, 2011. *Downtown Precise Plan*, January 2011 (Last Amended June 2018). Available at: <https://www.redwoodcity.org/home/showpublisheddocument/10001/636673547793200000>.

City of Redwood City, 2010. *Redwood City General Plan – Circulation Element*, October 2021. Available at: <https://www.redwoodcity.org/home/showpublisheddocument/5099/635782756590100000>.

Fehr & Peers, *Redwood City DTPP Plan-Wide Amendments – Transportation Analysis*, November 2022. This document is provided in Appendix C of this SEIR.

Metropolitan Transportation Commission and Association of Bay Area Governments, 2021. *Plan Bay Area 2050*, October 2021. Available at: https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

National Transit Database, 2020. *Caltrain 2020 Annual Agency Profile*, 2020. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/transit_agency_profile_doc/2020/90134.pdf.

State of California Governor’s Office of Planning and Research, 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018. Available at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

CHAPTER 10

Utilities and Infrastructure

This SEIR chapter analyzes the effects of the changes to utilities and infrastructure proposed as part of the DTPP Plan-Wide Amendments, focusing on changes to the DTPP EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts. While analysis of impacts related to solid waste were included in Chapter 8, *Public Services*, of the DTPP Final EIR, topics related to solid waste are analyzed in this section to align with relevant utility and service system topics. Consistent with the organization of the DTPP Final EIR, this section also addresses hydrology and water quality issues.

Findings of the DTPP Final EIR

Topics related to water and wastewater were addressed in the Utilities and Infrastructure chapter of the DTPP Final EIR. Redwood City's 2005 Urban Water Management Plan (UWMP) was used as the basis for the water supply analysis, and the DTPP Final EIR found that the 2005 UWMP accounted for projected growth within the DTPP area and concluded that adequate water supply was available to serve proposed growth. Accordingly, the DTPP Final EIR determined that the DTPP would have no impact related to water supply.

The DTPP Final EIR found that existing water lines had capacity to serve the DTPP area, but upsizing or water line replacements could be needed in the future due to aging infrastructure. Additional improvements could also be needed to ensure adequate fire flow to new development within the DTPP area. The construction of water system improvements was described to be temporary and within existing rights of way, and no unusual significant environmental impact were anticipated due to construction activity. As such, the DTPP Final EIR determined that impacts related to potable and fire flow water systems were less than significant and no mitigation was required.

The DTPP Final EIR found that the available treatment capacity at the South Bayside System Authority's¹ wastewater treatment plant would be adequate to meet the net increase in generation from the DTPP. Thus, the DTPP would not result in any wastewater capacity exceedances, and impacts were determined to be less than significant and no mitigation was required.

The DTPP Final EIR found that individual projects developed within the DTPP area would include replacing existing developed areas with new development, and although residential and commercial densities would increase, there would be minimal difference between the DTPP

¹ Since adoption of the DTPP, the South Bayside System Authority has transitioned to Silicon Valley Clean Water.

buildout scenario and existing conditions in terms of stormwater runoff. No areawide drainage improvements were anticipated, and the DTPP was found to potentially result in a reduction of stormwater runoff, due to increased landscaping. As a result, impacts on storm drainage infrastructure were determined to be less than significant and no mitigation was required.

Stormwater quality impacts during construction activities were analyzed in the DTPP Final EIR and the analysis determined that the DTPP would have a less than significant impact as it relates to construction runoff contaminating receiving waters because impacts would be adequately addressed through compliance with City, County, and Regional Water Quality Control Board (RWQCB) requirements. Additionally, compliance with the NPDES Construction General Permit and associated SWPPP would reduce water quality impacts. For these reasons, no mitigation was required.

Long-term water quality impacts were analyzed in the DTPP Final EIR, which determined that, if not properly controlled, the increased activity in the area could lead to substantial water quality issues. However, the long-term impacts would be adequately addressed through compliance with City, County, and RWQCB requirements, and the DTPP Final EIR concluded that the impacts would be less than significant, and no mitigation was required.

Groundwater impacts were analyzed in the DTPP Final EIR and were determined to be less than significant impacts because Redwood City did not then have and had no intention of using groundwater as a water supply, so future development within the DTPP area would not have caused a depletion of groundwater supplies. Additionally, because future developments would be constructed on previously developed land, there would not be a substantial increase in impervious surfaces.

Flooding impacts were analyzed in the DTPP Final EIR, which determined that the impacts would be less than significant because the DTPP area was not within an established 100-year flood zone per the 2012 Flood Insurance Rate Maps. No mitigation was required.

Flooding impacts related to dam failure were analyzed in the DTPP Final EIR and were determined to be less than significant. The DTPP area is within the Emerald Lake Dam inundation area and could be subject to flooding in the event of a dam failure. The City has included potential dam failure in its emergency preparedness, response, and evacuation programs. Therefore, the potential flooding impacts related to failure of the Emerald Lake dam would be less than significant. No mitigation was required.

Seiche, Tsunami, and Mudflow impacts were analyzed in the DTPP Final EIR and were determined to be less than significant. The DTPP area is not within a tsunami hazard zone and is far enough inland that a seiche would not produce enough force to pose a substantial risk to persons or property. Additionally, the DTPP area is flat and away from hillsides and there is no risk of being subject to a debris flow. No mitigation was required.

Analysis of impacts related to solid waste were included in Chapter 8, *Public Services*, of the DTPP Final EIR. The DTPP Final EIR found that the DTPP would increase the demand for solid waste collection and disposal services, but would not generate an inordinate volume of solid

waste and the Ox Mountain Landfill would have sufficient capacity to serve the DTPP area. Therefore, the DTPP Final EIR determined impacts related to solid waste to be less than significant and no mitigation was required.

10.1 Environmental Setting

10.1.1 Water Infrastructure

Water Supply

The City's water service area spans approximately 17 square miles and includes the incorporated limits of Redwood City, as well as areas of San Mateo County outside of those limits, including Cañada College, the Emerald Lake Hills Area, a portion of the Town of Woodside, and the City of San Carlos. The City currently purchases all of its potable water supplies from the San Francisco Regional Water System (RWS), which is operated by the San Francisco Public Utilities Commission (SFPUC).² 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 the 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.³ The SFPUC RWS supplies water to both retail and wholesale customers. Retail customers include residents, businesses, and industries located within the City and County of San Francisco's boundaries. Wholesale customers include 26 cities and water supply agencies in Alameda, San Mateo and Santa Clara counties, including Redwood City.⁴

The City is a member agency of Bay Area Water Supply and Conservation Agency (BAWSCA) and purchases treated water from the SFPUC RWS in accordance with the November 2018 Amended and Restated Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda, San Mateo, and Santa Clara Counties, which was adopted in 2019. The term of the agreement is 25 years, with a beginning date of July 1, 2009 and an expiration date of June 30, 2034.⁵ Per the agreement, the City has an Individual Supply Guarantee (ISG) of 10.93 million gallons per day (MGD), or 12,243 acre-feet per year (AFY), supplied by the SFPUC RWS. Between 2016 and 2020, the City purchased between 67 percent and 80 percent of its ISG.

² West Yost, 2022. *Downtown Precise Plan (DTPP) Plan-Wide Amendments Project Water Supply Evaluation*, November 2022 (Appendix E).

³ City of Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City, adopted June 2021.

⁴ West Yost, 2022. *Downtown Precise Plan (DTPP) Plan-Wide Amendments Project Water Supply Evaluation*, November 2022 (Appendix E).

⁵ According to the Redwood City 2020 Urban Water Management Plan (UWMP; discussed below in Section 10.2.15; see UWMP p. 84), "Water supplies from the SFPUC RWS through 2045 are projected to be equivalent to the City's ISG of 12,243 AFY, which is the City's contractual entitlement to SFPUC wholesale water, which survives in perpetuity." UWMP available at: <https://www.redwoodcity.org/residents/water>.

In addition, although the City does not currently use groundwater as a supply source, it is in the early phase of evaluating groundwater for potential future emergency supply. A preliminary assessment of groundwater production potential for the City found that sufficient groundwater supply may be available for the City to use as a back-up supply. The portion of the subbasin underlying the City is in a state of equilibrium and water quality is expected to be sufficient for municipal and irrigation uses, though some level of treatment may be required. The hydrological setting for groundwater is discussed in Section 10.1.6, Hydrological Setting, below.

The City also operates a water recycling program, which supplies non-potable water to a portion of the City's customers. Silicon Valley Clean Water (SVCW) operates the wastewater treatment plant that produces recycled water for the City (both are discussed further below). The Redwood City recycled water project has a design capacity of up to 3,238 AFY of average annual demand and includes the option to export recycled water to neighboring communities.⁶

Water Distribution System

Potable Water

The City's water system is comprised of 260 miles of water distribution and transmission pipelines, ten pump stations, 60 dedicated water sampling stations, 13 water storage tanks with a capacity of 22 million gallons. The City's Water System Master Plan (WSMP) identifies strategies for maintaining and improving water system service levels for the community aligned with Level of Service (LOS) Goals. These goals include: 1) maintain reliable customer service; 2) protect public health and operator safety; and 3) provide cost-effective projects. These LOS Goals guide capital expenditures for the system and future updates to water rates and connection fees needed to support the water system. Given that Redwood City has developed over more than 150 years, roughly 40 percent of the City's water infrastructure was originally installed between 1903 and 1950, and regular investments are needed to ensure residents have reliable water service.⁷

Recycled Water

Recycled water is an alternative water source that can safely replace potable water for a variety of non-potable services. Investment in recycled water has helped to reduce demands on the City's

⁶ West Yost, 2022. *Downtown Precise Plan (DTPP) Plan-Wide Amendments Project Water Supply Evaluation*, November 2022 (Appendix E). Current theoretical supply capacity of the recycled water project is 2,857 AFY, with potential expansion, when demand warrants, of up to 3,238 AFY. Usage of recycled water was 856 AFY in 2020, according to the UWMP; current demand is limited both by the geographic area served by recycled water supply lines and by the fact that many existing uses do not have the capacity to efficiently use recycled water. The "supply" of recycled water identified in the UWMP is limited by the demand, as the recycled water project does not produce recycled water for which no demand exists. Additionally, because recycled water cannot substitute for potable water in certain instances, the full potential supply of recycled water is not considered in the UWMP so as not to artificially "inflate" the City's overall water supply. For these reasons, within the UWMP, supply and demand values for any given scenario will match. Nevertheless, should demand for recycled water increase beyond what was projected in the UWMP, there is capacity to meet that demand up to 2,857 AFY at present and potentially up to 3,238 AFY in the future.

⁷ Redwood City, 2021b. Staff Report, Study Session on long term planning for City water, sewer and storm drain utilities, October 11, 2021. Available online: <https://meetings.redwoodcity.org/AgendaOnline/Documents/ViewDocument/STAFF%20REPORT.pdf?meetingId=2252&documentType=Agenda&itemId=6420&publishId=9325&isSection=false>. Accessed February 22, 2022.

potable water supply significantly, and it currently accounts for 9 percent of the City’s overall water demand. SVCW produces Redwood City’s recycled water at its wastewater treatment plant. The City’s recycled water distribution system includes two 2.18-million-gallon storage tanks, a distribution pump station, five sample stations, and approximately 19 miles of distribution pipelines. In 2016, the City completed Phase 2A of its recycled water project, which brought recycled water west of Highway 101 to serve Redwood City’s Downtown area near Kaiser Hospital. In 2019 and 2020, the City completed two critical recycled water pipeline extensions at the Stanford Redwood City campus and Kaiser Medical Office Building #2. Expansion of the recycled water system is in progress with two major recycled water pipeline extensions for the Broadway Plaza and South Main Mixed-Use projects. These pipe alignments will enable the City to connect other existing and newly developed properties to recycled water, further reducing demands on the potable water system.⁸ The Kaiser Medical Office Building #2 is located adjacent to the northeast of the amended DTPP area, the Broadway Plaza project is located approximately 0.27 mile east of the amended DTPP area, and the South Main Mixed-Use project is located adjacent to the southeast of the amended DTPP area.⁹

10.1.2 Wastewater

Wastewater Treatment

SVCW is a Joint Powers Authority comprised of the City of Belmont, City of Redwood City, City of San Carlos, and West Bay Sanitary District. SVCW owns and operates a wastewater treatment plant, including support facilities necessary for the operation and maintenance of the treatment plant, wastewater conveyance system force mains, five wastewater conveyance pump stations, and an effluent outfall into the San Francisco Bay.¹⁰

SVCW’s Wastewater Treatment Plant is located in the Redwood Shores area of Redwood City. The Plant processes all wastewater delivered to the Plant from the service areas via the conveyance system. The regional wastewater treatment plant has an average dry weather flow permitted capacity of 29 million gallons per day (MGD), and a peak wet weather flow capacity of 71 MGD. The plant also has an approximately nine-mile influent force main pipeline that conveys wastewater from the SVCW Member Entities to five pump stations, the treatment plant, and a 1.25-mile effluent disposal pipeline that discharges treated effluent into the San Francisco Bay. Four pump stations pump raw wastewater to the SVCW force main and one booster station pumps peak wet weather flows from West Bay Sanitary District and City of Redwood City when necessary. SVCW owns, operates and maintains the pump stations and is reimbursed by the individual member agencies for costs expended on the operation and maintenance related to the

-
- ⁸ Redwood City, 2021b. Staff Report, Study Session on long term planning for City water, sewer and storm drain utilities, October 11, 2021. Available online: <https://meetings.redwoodcity.org/AgendaOnline/Documents/ViewDocument/STAFF%20REPORT.pdf?meetingId=2252&documentType=Agenda&itemId=6420&publishId=9325&isSection=false>. Accessed February 22, 2022.
- ⁹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.
- ¹⁰ SVCW, 2020b. 2020-21 Operating Budget, Adopted April 20, 2020. Available online: <https://svcw.org/wp-content/uploads/2020/11/SVCW-FY2020-21-Budget-Adopted.pdf>. Accessed February 22, 2022.

member agency's service areas. SVCW also provides recycled water to the City of Redwood City.¹¹

Wastewater Conveyance

The City operates a sanitary sewer system that consists of 184 miles of gravity sewers (approximately 5,300 line segments), 4,772 manholes, 10 miles of force mains, and 31 lift stations. The sewers range in size from 4 inches to 60 inches in diameter and the piping system includes 26 siphons. Property owners are responsible for installation, maintenance and repair of the parcel upper private sewer lateral(s). The City is responsible for the lower lateral from the property line to the City main line.

The City of Redwood City 2013 Sewer Master Plan identifies and prioritizes capacity and rehabilitation improvement projects and recommends a phased capital improvement program (CIP), including budget estimates, for implementing the needed capacity improvements to the wastewater collection system. The 2013 Master Plan included a hydraulic analysis with updated flow monitoring information and land use data. The update resulted in revisions to the City's future capital improvement program for both existing and future capacity enhancement requirements. It should be noted that the analysis from the 2013 Sewer Master Plan is now outdated and will be revised/updated with an additional study. The City currently funds its collection system capital needs on a pay-as-you-go, cash basis, and has increased its sewer rates accordingly.¹² The City has completed a number of the capacity improvement projects recommended in previous master plans, but capacity deficiencies in the conveyance system remain. Additional redevelopment is projected in the future, which will further increase wastewater flows and may create additional capacity constraints.¹³

The sanitary sewer collection system is systematically upgraded through the Sewer Replacement Program, replacing ten to fifteen thousand linear feet of sewer pipes annually. CCTV inspections are also performed annually to understand the condition of the sewer collection system pipelines and evaluated to prioritize pipeline replacements. Flow capacity has also been evaluated to determine areas of the collection system which may need to be upsized to meet future development flows and requirements. In addition, capital improvements to sewer pipelines, the City rehabilitates one to two of its 31 sewer pump stations each year.¹⁴

¹¹ SVCW, 2020a. Capital Improvement Program 2020 Update FY20-21 to FY29-30, January 2020. Available online: <https://svew.org/wp-content/uploads/2020/08/2020-SVCW-CIP-Update.pdf>. Accessed February 22, 2022.

¹² Redwood City, 2018. Sewer System Management Plan Revisions, March 2018. Available online: <https://new.thecity.redwoodcity.org/pub/onbase/siredl.ashx?fileid=241989>. Accessed February 22, 2022.

¹³ Redwood City, 2021b. Staff Report, Study Session on long term planning for City water, sewer and storm drain utilities, October 11, 2021. Available online: <https://meetings.redwoodcity.org/AgendaOnline/Documents/ViewDocument/STAFF%20REPORT.pdf?meetingId=2252&documentType=Agenda&itemId=6420&publishId=9325&isSection=false>. Accessed February 22, 2022.

¹⁴ Redwood City, 2021b. Staff Report, Study Session on long term planning for City water, sewer and storm drain utilities, October 11, 2021. Available online: <https://meetings.redwoodcity.org/AgendaOnline/Documents/ViewDocument/STAFF%20REPORT.pdf?meetingId=2252&documentType=Agenda&itemId=6420&publishId=9325&isSection=false>. Accessed February 22, 2022.

10.1.3 Stormwater Drainage

The Redwood City Public Works Services Department maintains, operates, and repairs Redwood City’s stormwater system. The stormwater system is comprised of 22 pump stations, 2,685 storm drain catch basins, inlets, and siphons, more than 100 miles of storm drain pipe, 82 open culverts, more than 10 miles of creeks, drain ditches, and canals, and 150 acres of storm retention basins in Redwood Shores. The stormwater drainage system is highly regulated as the stormwater eventually flows into the San Francisco Bay.¹⁵

10.1.4 Energy and Telecommunications Systems

Pacific Gas and Electric

Pacific Gas and Electric Company (PG&E) provides electric and natural gas service in Redwood City. In the City, there are overhead and underground PG&E electric distribution systems, and overhead and underground secondary distribution and service system. The closest major electric transmission line (under 100 kV) to the amended DTPP area runs east to west across above Highway 101 east of Woodside Road.¹⁶ In the City, there are also underground natural gas distribution systems, with the major natural gas transmission line running through the DTPP area along Marshall Street and Winslow Street.¹⁷

Peninsula Clean Energy

Peninsula Clean Energy (PCE) is a community choice energy (CCE) program which allows Redwood City, along with the County and the other towns and cities in San Mateo County, to pool the electricity demands of our businesses and residents, purchase renewable power and reinvest in local infrastructure. All customers are automatically enrolled in PCE’s “default” option, EcoPlus, which is both cleaner and typically less expensive than PG&E’s default product. Customers may also choose to “opt up” to PCE’s 100 percent renewable option, ECO100, which is slightly more expensive than PG&E’s default product. Customers can also choose to “opt out” and return to PG&E.¹⁸

Telecommunications

The telecommunications system serving the City consists of aboveground and buried telecommunications circuits from several providers, primarily AT&T and Comcast.

¹⁵ Redwood City, 2010. Redwood City New General Plan Draft Environmental Impact Report, May 2010.

¹⁶ Pacific Gas and Electric Company (PG&E), 2022a. Economic Development Site Tool, Electric Transmission Lines. Available online: https://www.pge.com/en_US/large-business/services/economic-development/opportunities/sitetool.page. Accessed February 22, 2022.

¹⁷ PG&E, 2022b. Explore our natural gas transmission pipeline map. Available online: https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page. Accessed February 22, 2022.

¹⁸ Redwood City, 2022. Peninsula Clean Energy. Available online: <https://www.redwoodcity.org/departments/public-works/environmental-initiatives/energy/peninsula-clean-energy>. Accessed February 22, 2022.

10.1.5 Solid Waste

Recology of San Mateo County is the City's selected contractor to handle all solid waste collection for Redwood City, including garbage, recyclables, and organics. The Ox Mountain Sanitary Landfill (2 Mi N-E Half Moon Bay Off Hwy 92, Half Moon Bay, CA) is the disposal site for all solid waste collected by Recology that is not diverted. Ox Mountain Landfill is permitted to accept 3,598 tons of waste per day and currently averages approximately 1,650 tons of solid waste per day for disposal (including construction/demolition, and municipal waste). The Ox Mountain Landfill has approximately 17,240,000 cubic yards of remaining capacity as of February 2022, and is estimated to reach permitted disposal capacity by the year 2034.¹⁹ In 2019, the statewide average disposal rate was 6.7 pounds per resident per day with a total of approximately 42.2 million tons of solid waste landfilled.²⁰ The average disposal rate for the City in 2020 was 5.2 pounds per resident per day and 6.8 pounds per employee per day.²¹

10.1.6 Hydrological Setting

Groundwater

Redwood City is within the Santa Clara Groundwater Basin, San Mateo Plain Subbasin (Basin 2-009.03). The subbasin is bounded by the Santa Cruz Mountains to the west, San Francisco Bay to the east, and the Westside Basin to the north, and the San Francisquito Creek and the Santa Clara Subbasin to the south. The San Mateo Plain Subbasin is not adjudicated and, as of 2019, is ranked a very low priority basin.²² As a very low priority subbasin, the San Mateo Plain Subbasin is not subject to the requirements under the Sustainable Groundwater Management Act (SGMA). Groundwater in the Santa Clara Subbasin is of generally good quality. Key issues of concern in the subbasin are land subsidence caused by past groundwater overdraft, and saline intrusion into groundwater through tidal channels near southern portions of San Francisco Bay.

Flooding

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), much of the DTPP area north (bayward) of approximately Broadway is within the 100-year flood zone.²³

¹⁹ California Department of Resources Recycling and Recovery (CalRecycle), 2022. Application For Solid Waste Facility Permit and Waste Discharge Requirements, 5-Year Permit Review Application, February 4, 2022.

²⁰ CalRecycle, 2021. California's 2019 Per Capita Disposal Rate Estimate, last updated February 17, 2021. Available: <https://www.calrecycle.ca.gov/LGcentral/goalmeasure/disposalrate/mostrecent>. Accessed March 11, 2022.

²¹ CalRecycle, 2020. Jurisdiction Per Capita Disposal Trends, Redwood City, 2016-2020. Available: <https://www2.calrecycle.ca.gov/LGcentral/AnnualReporting/ReviewReports>. Accessed April 11, 2022.

²² City of Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City.

²³ Federal Emergency Management Agency (FEMA), 2019. National Flood Insurance Program, Flood Insurance Rate Map. San Mateo County, California and Incorporated Areas. Panel 301 of 510. Map Number 06081C0301F. Map. Scale 1:6,000.

Dam Inundation Zones

According to the dam failure inundation map published by the Division of Safety of Dams (DSOD), portions of Redwood City (including the DTPP area) are within the inundation zone for the Emerald Lake Dam.²⁴

Tsunami and Seiche

Tsunamis are ocean waves generated by vertical movement of the sea floor, normally associated with earthquakes or volcanic eruptions. Seiches are oscillations of enclosed or semi-enclosed bodies of water that result from seismic events, wind stress, volcanic eruptions, underwater landslides, and local basin reflections of tsunamis.

According to the Tsunami Hazard Area Map for San Mateo County, the proposed DTPP Plan-Wide Amendments boundary is outside of the delineated hazard area and would not be subject to tsunami or seiche.²⁵

10.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the 2010 DTPP EIR. DTPP EIR Chapter 10, *Utilities and Infrastructure*, Section 10.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.

10.2.1 Urban Water Management Planning Act

California Water Code Section 10610 *et seq.* requires all public water systems that provide water for municipal purposes to more than 3,000 customers, or that supply more than 3,000 AFY, to prepare a UWMP. UWMPs are key water supply planning documents for municipalities and water purveyors in California, and often form the basis of Water Supply Assessments (WSAs) (refer to the following discussion of Senate Bill [SB] 610 and SB 221) prepared for individual projects. UWMPs must be updated at least every 5 years on or by July 1, in years ending in 1 and 6. The City of Redwood City adopted its 2020 UWMP in June 2021.²⁶

10.2.2 Senate Bills 610 and 221

The purpose and legislative intent of SB 610 and SB 221, enacted in 2001, is to require specific evaluations be performed and documented by the local water provider that indicate there are sufficient water supplies available to meet the project's anticipated water demand. SB 610

²⁴ Division of Safety of Dams (DSOD), 2019. Emerald Lake 1 Lower Dam Sunny Day Failure Inundation Map. Sheet 1 of 1. DSOD Dam #612.000. Department of Water Resources.

²⁵ California Geological Survey (CGS), 2021. Tsunami Hazard Area Map for the County of San Mateo. California Geological Survey. March 23, 2021.

²⁶ City of Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City, adopted June 2021.

requires the local water provider for a large-scale development project to prepare a WSA.²⁷ The WSA evaluates the water supply available for new development based on anticipated demand. The WSA must be included in the environmental document. The lead agency may evaluate the information presented in the WSA, and then must determine whether the projected water supplies would be sufficient to satisfy the project's demands in addition to existing and planned future uses. Completion of a WSA requires collection of proposed water supply data and information relevant to the project in question, an evaluation of existing/current use, a projection of anticipated demand sufficient to serve the project for a period of at least 20 years, delineation of proposed water supply sources, and an evaluation of water supply sufficiency under single-year and multiple-year drought conditions.

West Yost prepared a Water Supply Evaluation, which is modeled after SB 610's requirements for a WSA, for the proposed DTPP Plan-Wide Amendments on behalf of the City, and is included as **Appendix E** of this SEIR. The conclusions of the WSE are described and analyzed in Impact UT-2 below.

SB 221 requires the local water provider to provide "written verification" of "sufficient water supplies" to serve subdivisions involving more than 500 residential units per Government Code Section 66473.7. Sufficiency is different under SB 221 than under SB 610. Under SB 221, sufficiency is determined by considering:

- The availability of water over the past 20 years;
- The applicability of any urban-water shortage contingency analysis prepared in compliance with Water Code Section 10632;
- The reduction in water supply allocated to a specific use by an adopted ordinance; and
- The amount of water that can be reasonably relied upon from other water supply projects, such as conjunctive use, reclaimed water, water conservation, and water transfer.

As a result of the information contained in the written verification, a city or county may attach conditions during the tentative map approval process to ensure that an adequate water supply is available to serve the proposed plan. If the verification relies on projected water supplies that are not currently available, it must include detailed information about the source of the new water, the financing for any capital outlays required, the securing of applicable federal, state and local permits for any necessary infrastructure to deliver the water, and any necessary regulatory approvals. Typically, following project certification, an additional water supply verification must be completed at the tentative map stage, prior to adoption of the final map, for certain tentative maps.

²⁷ All projects that meet any of the following criteria require a WSA: (1) A proposed residential development of more than 500 dwelling units; (2) a proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) a proposed hotel or motel, or both, having more than 500 rooms; (5) a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area; (6) a mixed-use project that includes one or more of the projects specified in SB 610; or (7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

10.2.3 Assembly Bill 325

Assembly Bill (AB) 325, the Water Conservation in Landscaping Act of 1990, directs local governments to require the use of low-flow plumbing fixtures and the installation of drought-tolerant landscaping in all new development. Pursuant to the Water Conservation in Landscaping Act, the California Department of Water Resources developed a Model Water Efficient Landscape Ordinance (MWELo). Currently, development projects of sufficient size/scope as outlined in the State MWELo are required to self-certify by completing MWELo worksheets to demonstrate compliance with MWELo standards. An annual report, submitted to the state, is prepared by the City to summarize the number and scale of landscape improvements.

10.2.4 Water Code Section 10608 et seq. (Senate Bill 7 or Senate Bill X7-7)

Water Code Section 10608 et seq. required urban retail water suppliers to set and achieve water use targets that would help the state achieve a 20 percent per capita reduction in urban water use by 2020. SB X7-7 required each urban retail water supplier to develop urban water use targets and an interim urban water use target, in accordance with specified requirements. The bill is intended to promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in California Water Code Section 10631 as part of UWMPs. The City's UWMP complied with these requirements.

10.2.5 Senate Bill 7 (2016)

In September 2016, Governor Jerry Brown signed into law SB 7, which requires new multifamily residential rental buildings in California constructed after January 1, 2018, to include a sub-meter for each dwelling unit and to bill tenants in apartment buildings accordingly for their water use to encourage water conservation.

10.2.6 Executive Orders B-29-15 and B-37-16

In April 2015, Governor Brown issued Executive Order B-29-15, which called for mandatory water use reductions. The executive order required cuts for public landscaping and institutions that typically use large amounts of water (e.g., golf courses), banned new landscape irrigation installation, and required municipal agencies to implement conservation pricing, subsidize water-saving technologies, and implement other measures to reduce the state's overall urban water use by 25 percent. The order also required local water agencies and large agricultural users to report their water use more frequently.

In May 2016, Governor Brown issued Executive Order B-37-16, which made the mandatory water use reduction of 25 percent permanent and directed the California Department of Water Resources and State Water Resources Control Board (State Water Board) to strategize further water reduction targets. The order also made permanent the requirement that local agencies report their water use monthly. Additionally, certain wasteful practices such as sidewalk hosing and runoff-causing landscape irrigation were permanently outlawed, while local agencies must

prepare plans to handle droughts lasting 5 years. The current Urban Water Management Plan outlines the steps the City has taken and will be taking to comply with the reduction.²⁸

10.2.7 Senate Bill 6060 and Assembly Bill 1668

In 2018, Senate Bill 606 and Assembly Bill 1668 were passed and build on California's ongoing efforts to make water conservation a way of life and to provide a structure for long-term improvements in water conservation and drought planning. The two bills include provisions that require both urban and agricultural water suppliers to set annual water budgets and prepare for droughts; mandate that urban water suppliers develop water use objectives and long-term standards for efficient water use; provide incentives for water suppliers to recycle water; and identify small water suppliers and rural communities that may be at risk of drought and water shortage vulnerability and provide recommendations for drought planning.

10.2.8 California Green Building Standards Code

Water and Wastewater

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, conserve natural resources, and promote the use of energy-efficient materials and equipment. Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Mandatory measures related to water conservation include water-conserving plumbing fixture and appliance requirements, including flow rate maximums, compliance with state and local water-efficient landscape standards for outdoor potable water use in landscape areas, and recycled water systems, where available. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the 2019 amendments to the CALGreen Code became effective January 1, 2020. Updates include more stringent requirements for residential metering faucets, and a requirement that all residential and non-residential developments adhere to a local water efficient landscape ordinance or to the State of California's Model Water Efficient Landscape Ordinance, whichever is more stringent. As a condition of approval, the City requires that all projects with more than 500 square feet of landscaping install a landscape irrigation system that conforms to the California Water-Efficient Landscape Ordinance and Model Water Efficiency Landscape Ordinance requirements.²⁹

Solid Waste

As amended, the CALGreen Code (California Code of Regulations Title 24, Part 11) requires that readily accessible areas be provided for recycling by occupants of residential buildings. The CALGreen Code also requires that residential building projects recycle and/or salvage for reuse a minimum of 65 percent of their non-hazardous construction and demolition waste, or comply with a

²⁸ 2020 Urban Water Management Plan for City of Redwood City, June 2021; available at: <https://www.redwoodcity.org/home/showpublisheddocument/23745/637618448235530000>. Reviewed April 24, 2022.

²⁹ Redwood City Municipal Code Section 47.120.

local construction and demolition waste management ordinance, whichever is more stringent (Section 5.408.1). The 2016 version of the code increased the minimum diversion requirement for non-hazardous construction and demolition waste to 65 percent from 50 percent (in the 2013 and earlier versions) in response to AB 341, which declared the policy goal of the state that not less than 75 percent of solid waste generated would be source reduced, recycled, or composted by 2020.

10.2.9 Assembly Bill 939 (California Integrated Waste Management Act)

AB 939, enacted in 1989 and known as the Integrated Waste Management Act (Public Resources Code Section 40050 et seq.), requires each city and county in the state to prepare a Source Reduction and Recycling Element to demonstrate a reduction in the amount of waste being disposed to landfills. The act required each local agency to divert 50 percent of all solid waste generated within the local agency's service area by January 1, 2000. Diversion includes waste prevention, reuse, and recycling. SB 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal.

The Integrated Waste Management Act requires local agencies to maximize the use of all feasible source reduction, recycling, and composting options before using transformation (incineration of solid waste to produce heat or electricity) or land disposal. The act also resulted in the creation of the state agency now known as the California Department of Resources Recycling and Recovery (CalRecycle). Under the Integrated Waste Management Act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances. The act also set in place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

In 2011, AB 341 amended AB 939 to declare the policy goal of the state that not less than 75 percent of solid waste generated would be source reduced, recycled, or composted by the year 2020, and annually thereafter.

10.2.10 Assembly Bills 341 and 1826

AB 341, signed into law in 2012, requires commercial and multi-family dwellings to recycle. AB 1826 (2014) furthered diversion and recycling requirements by requiring that all businesses and multi-family dwellings with more than five units also divert organic material. AB 1826 does not require multi-family dwellings to divert organic food waste.

10.2.11 Senate Bill 1383

SB 1383 established targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. SB 1383 granted CalRecycle the regulatory authority required to achieve the organic-waste

disposal reduction targets. It also established a target of recovering not less than 20 percent of currently disposed edible food for human consumption by 2025.

10.2.12 National Pollutant Discharge Elimination System Construction General Permit

Construction of individual projects that could be developed as part of the proposed DTPP Plan-Wide Amendments would disturb more than one acre of land surface, potentially affecting the quality of stormwater discharges into waters of the United States and would, therefore, be subject to the National Pollutant Discharge Elimination System (NPDES) *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ).

The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges from construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a risk level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the risk to receiving waters during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could be discharged to receiving water bodies, and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving-waters risk level reflects the risk to receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards
- Good site management “housekeeping”
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from coming into contact with stormwater and moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management, and good housekeeping. They are intended to protect surface water quality by preventing eroded soil and construction-related pollutants from migrating off-site from the construction area. Routine inspection of all BMPs is required under the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff.

Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and washing and fueling of vehicles and equipment. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site after construction).

In the DTPP area, the Construction General Permit is implemented and enforced by the San Francisco Bay Regional Water Quality Control Board, which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the San Francisco Bay Regional Water Quality Control Board of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

10.2.13 National Pollutant Discharge Elimination System Waste Discharge Regulations

Discharges of stormwater runoff from municipal separate storm sewer systems (MS4s) are regulated by the Municipal Regional Stormwater NPDES permit, under Order No. R2-2015-0049; NPDES Permit No. CAS612008, issued by the San Francisco Bay Regional Water Board.

Under CWA Section 402(p), stormwater permits are required for discharges from MS4s that serve populations of 100,000 or more. The Municipal Regional Permit (MRP) manages the Phase I Permit Program (serving municipalities of more than 100,000 people), the Phase II Permit Program (for municipalities of fewer than 100,000 people), and the Statewide Storm Water Permit for the California Department of Transportation.

The State Water Board and the individual water boards implement and enforce the MRP. Multiple municipalities, including the City of Redwood City, along with San Mateo County, are co-permittees.

10.2.14 Municipal Regional Permit Provision C.3

Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface area, or 5,000 square feet or more of impervious surface area for regulated projects involving special land use categories (i.e., auto service, retail gasoline station, restaurant, and/or uncovered parking), are required to implement site design, source control, and Low Impact Development–based stormwater treatment controls to treat post-construction stormwater runoff. Low Impact Development–based treatment controls are intended to maintain or restore the site’s natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and for using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures be properly installed, operated, and maintained.

In addition, the MRP requires new development and redevelopment projects that create or replace 1 acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, generate silt pollutants, or cause other impacts on local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimum size threshold, drain into tidally influenced areas or directly into San Francisco Bay, or drain into hardened channels, or if they are infill projects in sub-watersheds or catchment areas that are at least 65 percent impervious.

10.2.15 San Mateo Countywide Integrated Waste Management Plan

The California Integrated Waste Management Act directs counties to prepare a Countywide Integrated Waste Management Plan (CIWMP). This plan consists of the Source Reduction and Recycling Elements (SRREs), the Household Hazardous Waste Elements (HHWEs), and the Nondisposal Facility Elements (NDFEs) of each jurisdiction, the Countywide Siting Element, and the Countywide Integrated Waste Management Summary Plan. The CIWMP addresses waste management conditions and provides an overview of the actions that will be taken to achieve the diversion requirements of Public Resources Code section 41780 and to maintain 15 years of disposal capacity. California statute requires the County of San Mateo to review its CIWMP every five years and then report on its adequacy to the California Integrated Waste Management Board. The last review of the CIWMP was completed in 2019.³⁰

10.2.16 Redwood City UWMP

The City’s UWMP is a foundational document and source of information about the City’s historical and projected water demands, water supplies, supply reliability and potential vulnerabilities, water shortage contingency planning, and demand management programs. The City of Redwood City adopted its 2020 UWMP in June 2021.³¹ The UWMP assumed, based on historical meter readings for existing dual plumbed projects, that future development within the City’s Recycled Water Service Area would allocate indoor water use at a ratio of 20 percent potable/80 percent recycled

³⁰ County of San Mateo, 2019. Five-Year CIWMP/RAIWMP Review Report, November 12, 2019

³¹ City of Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City, adopted June 2021.

for office and R&D uses and 70 percent potable/30 percent recycled for residential uses.³² All landscaping water demand projected for the amended DTPP area would be supplied by recycled water, as required under Redwood City Municipal Code Section 38.52.

A Water Shortage Contingency Plan (WSCP) was also developed to serve as a flexible framework of planned response measures to mitigate future water supply shortages. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the WSCP is to ensure that the City has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. Consistent with California Water Code (CWC) Section 10632, the WSCP includes six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent shortage. The WSCP identifies a suite of demand reduction measures for the City to implement at each level and procedures for the City to annually assess whether or not a water shortage is likely to occur in the coming year, among other things.

Each stage of the City's WSCP requires declaration by the City Council once a governing body, such as SFPUC, has required a voluntary or mandatory reduction in water use due to water supply shortages or an emergency. Each stage includes implementation of a mandatory water allocation program, voluntary restrictions on end uses, as well as various agency actions. Through the enactment of the various levels of the WSCP, the City can reduce the shortage in water supply by up to 55 percent.³³

During the preparation of the City's 2020 UWMP, information regarding the reliability of the SFPUC RWS was provided to the City by BAWSCA, in coordination with SFPUC. The following sections describe the potential impacts of the 2018 Bay-Delta Plan Amendment on SFPUC RWS reliability and SFPUC's Alternative Water Supply Planning Program designed to investigate and plan for new water supplies to address future long-term water supply reliability challenges and vulnerabilities on the RWS.

2018 Bay-Delta Plan Amendment

In December 2018, the State Water Resources Control Board (SWRCB) adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes water quality objectives to maintain the health of the rivers and the Bay-Delta ecosystem.³⁴ Among the goals of the adopted Bay-Delta Plan Amendment is to increase salmonid populations in the San Joaquin River, its tributaries (including the Tuolumne

³² Documentation concerning the assumptions recycled water demand assumptions include: Kennedy/Jenks Consultants, Water Recycling Feasibility Study for Redwood City, August 7, 2002, and Final Water Recycling Feasibility Update, prepared for the City of Redwood City, September 11, 2012; City of Redwood City, 2019 Engineering Standards, Volume III, Part XIII; City of Redwood City, 2019 Recycled Water Development Standards; and Redwood City Urban Water Management Plan.

³³ Redwood City Urban Water Management Plan (see footnote 28, p. 10-11), Table 8-2, page 128.

³⁴ State Water Resources Control Board Resolution No. 2018-0059, *Adoption of Amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Final Substitute Environmental Document*, December 12, 2018, available at https://www.waterboards.ca.gov/plans_policies/docs/2018wqcp.pdf.

River), and the Bay-Delta. Specifically, the plan amendment requires increasing flows in the Stanislaus, Tuolumne, and Merced rivers to 40 percent of unimpaired flow³⁵ from February through June every year, whether it is wet or dry. During dry years, this would result in a substantial reduction in the SFPUC's water supplies from the Tuolumne River watershed.

If this plan amendment is implemented, the SFPUC would be able to meet the projected water contractual obligations to its wholesale customers as presented in the SFPUC 2020 UWMP in normal years but would experience significant supply shortages in dry years. Implementation of the Bay-Delta Plan Amendment would result in substantial dry-year water supply shortfalls throughout the SFPUC's regional water system service area, including Redwood City. In single dry years, supply shortages for SFPUC's wholesale customers collectively, would range from 36 to 46 percent. In multiple dry years for SFPUC's wholesale customers collectively, supply shortages would range from 36 to 54 percent. Implementation of the Bay-Delta Plan Amendment will require rationing in all single dry and multiple dry years through 2045. If the Bay-Delta Plan Amendment is not implemented, SFPUC would be able to meet 100 percent of the projected purchases of its wholesale customers during all year types through 2045 except during the fourth and fifth consecutive dry years for base year 2045 when 15 percent wholesale supply shortages are projected.

The SWRCB has stated that it intends to implement the plan amendment by the year 2022, assuming all required approvals are obtained by that time. However, at this time, the implementation of the Bay-Delta Plan Amendment has not occurred and is uncertain for several reasons. First, since adoption of the Bay-Delta Plan Amendment, over a dozen lawsuits have been filed in both state and federal court, challenging the SWRCB's adoption of the Bay-Delta Plan Amendment, including two legal challenges filed by the federal government, at the request of the U.S. Department of Interior, Bureau of Reclamation in state and federal courts. These cases are in the early stage and there have been no dispositive court rulings to date.

Second, the Bay-Delta Plan Amendment is not self-executing and does not allocate responsibility for meeting its new flow requirements to the SFPUC or any other water rights holders. Rather, the plan amendment merely provides a regulatory framework for flow allocation, which must be accomplished by other regulatory and/or adjudicatory proceedings, such as a comprehensive water rights adjudication or, in the case of the Tuolumne River, the Clean Water Act section 401 certification process in the Federal Energy Regulatory Commission's relicensing proceeding for Don Pedro Dam. The license amendment process is currently expected to be completed in the 2022–2023 timeframe. This process and other regulatory and/or adjudicatory proceeding would likely face legal challenges and have lengthy timelines, and quite possibly could result in a different assignment of flow responsibility for the Tuolumne River than currently exists (and therefore a different water supply effect on the SFPUC).

Third, in recognition of the obstacles to implementation of the Bay-Delta Plan Amendment, the water board directed its staff to help complete a "Delta watershed-wide agreement, including potential flow measures for the Tuolumne River" by March 1, 2019, and to incorporate such agreements as an "alternative" for a future amendment to the Bay-Delta Plan to be presented to the

³⁵ "Unimpaired flow" represents the water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds.

[SWRCB] as early as possible after December 1, 2019.” In accordance with the SWRCB’s instruction, on March 1, 2019, SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary substitute agreement with the SWRCB (“March 1st Proposed Voluntary Agreement”). On March 26, 2019, the Commission adopted Resolution No. 19-0057 to support SFPUC’s participation in the Voluntary Agreement negotiation process. To date, those negotiations are ongoing under the California Natural Resources Agency and California Environmental Protection Agency and the leadership of the Newsom administration. The negotiations for a voluntary agreement have made significant progress since an initial framework was presented to the SWRCB on December 12, 2018. The package submitted on March 1, 2019 is the product of renewed discussions since Governor Newsom took office. While significant work remains, the package represents an important step forward in bringing together diverse California water interests.³⁶

In June 2021, in response to various comments from wholesale customers regarding the reliability of the RWS as described in SFPUC’s 2020 UWMP, the SFPUC provided a memorandum describing SFPUC’s efforts to remedy the potential effects of the Bay-Delta Plan Amendment. As described in the memorandum, SFPUC’s efforts include the following:

- Pursuing a Tuolumne River Voluntary Agreement
- Evaluating the drought planning scenario in light of climate change
- Pursuing alternative water supplies
- Litigating with the State over the Bay-Delta Plan Amendment
- Litigating with the State over the proposed Don Pedro FERC Water Quality Certification

For these reasons, whether, when, and the form in which the Bay-Delta Plan Amendment will be implemented, and how those amendments will affect the SFPUC’s water supply, is currently speculative.

Alternative Water Supply Program

In early 2020, the SFPUC began implementation of the Alternative Water Supply Planning Program (AWSP), a program designed to investigate and plan for new water supplies to address future long--term water supply reliability challenges and vulnerabilities of the RWS particularly in light of the possible implementation of the Bay-Delta Plan Amendment.

Included in the AWSP is a suite of diverse, non-traditional supply projects that, to a great degree, leverage regional partnerships and are designed to meet the water supply needs of the SFPUC Retail and Wholesale Customers through 2045. As of the most recent Alternative Water Supply Planning Quarterly Update, SFPUC has budgeted \$264 million over the next ten years to fund water supply projects. The drivers for the program include: (1) the adoption of the Bay-Delta Plan Amendment and the resulting potential limitations to RWS supply during dry years; (2) the net supply shortfall following the implementation of SFPUC’s Water System Improvement Plan

³⁶ In late October 2021, State regulators announced that these negotiations stopped before an agreement was reached. It is unclear whether or when negotiations might be reinitiated.

(WSIP)³⁷; (3) San Francisco’s perpetual obligation to supply 184 mgd to the Wholesale Customers; (4) adopted Level of Service Goals to limit rationing to no more than 20 percent system-wide during droughts; and (5) the potential need to identify water supplies that would be required to offer permanent status to interruptible customers.

The SFPUC is considering several water supply options and opportunities to meet all foreseeable water supply needs, including surface water storage expansion, recycled water expansion, water transfers, desalination, and potable reuse. These efforts and their expected benefit to supply reliability are listed below, and described in further detail in the City’s 2020 UWMP and SFPUC 2020 UWMP:

- Daly City Recycled Water Expansion (Regional; Normal and Dry-Year Supply)
- Alameda County Water District – Union Sanitary District Purified Water Partnership (Regional; Normal and Dry-Year Supply)
- Crystal Springs Purified Water (Regional; Normal and Dry-Year Supply)
- Los Vaqueros Reservoir Expansion (Regional; Dry Year Supply)
- Bay Area Brackish Water Desalination (Regional; Normal and Dry-Year Supply)
- Calaveras Reservoir Expansion (Regional; Dry Year Supply)
- Groundwater Banking (Dry Year Supply)
- Inter-Basin Collaborations

Capital projects under consideration would be costly and are still in the early feasibility and conceptual planning stages. The exact yields from these projects are not quantified at this time, as these supply projects would take 10 to 30 years to implement and the exact amount of water that can be reasonably developed is currently unknown.

As with traditional infrastructure projects, there is a need to progress systematically from planning to environmental review, and then on to detailed design, permitting and construction of these alternative water supply projects. Given the complexity and inherent challenges, these projects will require a long lead time to develop and implement. SFPUC staff have developed an approach and timeline to substantially complete planning and initiate environmental review by July 2023 for a majority of the alternative water supply projects under consideration.

10.2.17 Redwood City Green Infrastructure Plan

The City has prepared a Green Infrastructure Plan in compliance with San Francisco Bay MRP Provision C.3.j.i that details how Provision C.3 of the MRP and Low-Impact Development methods (described above) will be incorporated to retrofit existing storm drainage infrastructure using Green

³⁷ The Water System Improvement Program (WSIP) is a \$4.8 billion-dollar, multi-year capital program to upgrade the SFPUC’s regional and local water systems. The program repairs, replaces, and seismically upgrades crucial portions of the Hetch Hetchy Regional Water System. The program consists of 87 projects (35 local projects located within San Francisco and 52 regional projects) spread over seven counties from the Sierra foothills to San Francisco. The San Francisco portion of the program is 100 percent complete as of October 2020. The Regional portion is approximately 99 percent complete. The current forecasted date to complete the overall WSIP is May 2023.

Infrastructure facilities constructed on public and private parcels and within the public right-of-way. Green Infrastructure refers to the construction and retrofit of storm drainage to reduce runoff volumes, disperse runoff to vegetated areas, harvest and use runoff where feasible, promote infiltration and evapotranspiration, and use bio-retention and other natural systems to detain and treat runoff before it reaches the City's creeks and the San Francisco Bay. Green infrastructure facilities include, but are not limited to, pervious pavement, infiltration basins, bio-retention facilities or raingardens," green roofs, and rainwater harvesting systems. Green infrastructure can be incorporated into construction on new and previously developed parcels, as well as new and rebuilt streets, roads, and other infrastructure within the public right-of-way.³⁸ The City also has green infrastructure development guidelines that require stormwater treatment for developments in addition to C.3 regulated projects.

10.2.18 Requirements For Residential and Commercial Properties in Recycled Water Service Area

Municipal Code Section 38.52. Projects involving new multi-family residential and commercial subdivision of land for which a tentative map or parcel map is required pursuant to California Government Code section 66426 and Chapter 30, Subdivisions, of the Municipal Code or which require a City permit, or both, and which are located within the Recycled Water Service Area, are required to be dual plumbed to provide for the internal use of recycled water and to provide for the use of recycled water for landscape irrigation. The entire DTPP is within the Recycled Water Service Area. As stated above, the City's UWMP assumes recycled water use for future development in the Recycled Water Service Area.

10.2.19 Redwood City Stormwater Management and Discharge Control Program Ordinance

Municipal Code Chapter 27A. The City collects fees pursuant to the Stormwater Management and Discharge Control Program which can be used for the maintenance, management, operation and repair of the stormwater drainage system, the acquisition, construction and reconstruction (including the extension or replacement) of existing stormwater mains, collector mains and trunk lines, and the enlargement or construction of the stormwater drainage system.

10.2.20 Construction and Demolition Debris Diversion Ordinance

Municipal Code Chapter 9, Article XI. The Redwood City Construction and Demolition Debris Diversion Ordinance (C&D Ordinance) enhances the City's Green Building Ordinance to encourage the conservation of natural resources, reduce waste in landfills generated by construction projects, and promote the use of recycled materials. At least 65 percent of debris from construction, roofing, and full demolition projects must be diverted from landfills through recycling practices. All

³⁸ Redwood City, 2019. Green Infrastructure Plan, June 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/18796/637020675264700000>. Accessed February 22, 2022.

full demolition projects (residential and non-residential) are also required to divert 100 percent of inert material (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone).

10.2.21 Redwood City General Plan

The City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. Goals and policies relevant to public services and recreation include the following:

- *Goal BE-40:* Provide safe and reliable potable and recycled water storage and distribution systems that will meet current and future needs.
- *Policy BE-40.1:* Improve the level of service, reliability, quality, and life cycle of the city’s potable and recycled water storage and distribution system.
- *Policy BE-40.2:* Maintain the city’s water system to ensure adequate fire flow.
- *Policy BE-40.3:* Locate and design new capital-intensive potable and recycled water storage and distribution facilities, particularly storage tanks, in a manner that minimizes visual, cost, and environmental impacts to the surrounding area.
- *Policy BE-40.6:* Support the expansion of the city’s Recycled Water Service Area, and actively promote widespread use of recycled water in and around Redwood City.
- *Goal BE-41:* Provide adequate and reliable wastewater collection and treatment facilities that meet current and future needs.
- *Policy BE-41.1:* Continue to ensure adequate treatment capacity and collection system for Redwood City’s wastewater conveyed to at South Bayside System Authority (SBSA)³⁹ treatment facilities while protecting water quality and public health, and minimizing adverse impacts to the environment.
- *Policy BE-41.2:* Work with South Bayside System Authority (SBSA)⁴⁰ member agencies to ensure that the treatment facility has sufficient capacity to meet future wastewater treatment needs.
- *Goal BE-42:* Support reliable, high quality, and environmentally sound energy distribution systems to meet current and future needs.
- *Policy BE-42.1:* Require that improvements and maintenance to electric and gas transmission and distribution systems that are made to accommodate new growth be performed in a manner that maintains safety, reliability, and environmental compatibility.
- *Goal BE-43:* Advocate for access to high-quality established and emerging communications technologies to facilitate efficient and affordable communication for individuals, businesses, education, and government functions.

³⁹ Since adoption of the General Plan, the South Bayside System Authority has transitioned to Silicon Valley Clean Water.

⁴⁰ Since adoption of the General Plan, the South Bayside System Authority has transitioned to Silicon Valley Clean Water.

- *Policy BE-43.1:* Support efforts to develop improved communications technology in a manner that minimizes visual and environmental impacts to the surrounding area, while benefiting government, business, education, and public safety.
- *Policy BE-44.2:* Continue to require the placement of utilities underground with new development.
- *Goal BE-45:* Minimize the volume of solid waste that enters regional landfills.
- *Policy BE-45.1:* Meet or exceed State mandates regarding the diversion of waste from landfills.
- *Policy BE-45.2:* Encourage recycling, composting, and source reduction by residential and non-residential sources in Redwood City.
- *Policy BE-45.3:* Promote green building practices with respect to recycling material from building demolition and using recycled building materials in new construction.

10.3 Impacts and Mitigation Measures

10.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe utilities and infrastructure impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

10.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; or
- have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years; or
- 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
- 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
- fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste; or
- violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; or

- substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i. result in substantial erosion or siltation on- or off-site;
 - ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
 - iv. impede or redirect flood flows;
- in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

10.3.3 Impacts and Mitigation Measures

Overall impacts of the DTPP Plan-Wide Amendments on utilities and infrastructure (including hydrology and water quality) would be generally the same as those identified in the DTPP Final EIR, as further described below.

Impact UT-1: Implementation of the DTPP Plan-Wide Amendments would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (*Less than Significant with Mitigation*)

This SEIR assumes that the proposed DTPP Plan-Wide Amendments would indirectly result in additional office and residential development in the City and a subsequent increase in demand for water, recycled water, wastewater treatment, storm water drainage, electric power, natural gas, and telecommunications facilities. The developable area of the amended DTPP area is already urbanized with land uses that are served by existing utilities. New development would require connections to utilities that are already present in adjacent roadways (with the notable exception of recycled water pipelines, which do not currently serve most of the DTPP area), the construction of which is analyzed in this SEIR as part of the overall development of the proposed DTPP Plan-Wide Amendments. Changes proposed to utilities infrastructure as part of future developments will be subject to the City's review and permitting process. See the discussions below for anticipated infrastructure needs for each utility system associated with the proposed DTPP Plan-Wide Amendments.

The City is also currently preparing utilities studies for the water and recycled water, sewer, and stormwater drainage systems for the amended DTPP area to identify needed improvements,

provide cost estimates associated with the needed improvements, establish funding mechanism(s), and/or incorporate into the City's Capital Improvement Program (CIP).

Water

The DTPP Final EIR found that existing water lines had capacity to serve the amended DTPP area, but upsizing or water line replacements could be needed in the future due to aging infrastructure. Additional improvements could also be needed to ensure adequate fire flow to new development within the amended DTPP area. The construction of water system improvements was described to be temporary and within existing rights of way, and no unusual significant environmental impact would be anticipated due to construction activity. As such, the DTPP Final EIR determined impacts related to potable and fire flow water systems to be less than significant.

The City generally owns and maintains the water distribution mains that provide water service in Redwood City. Under standard City development procedures, each individual future project as a result of the proposed DTPP Plan-Wide Amendments would be required to pay applicable City development and water capacity fees, contribute fees to any SFPUC RWS Alternative Water Supply Planning Program funding mechanism that may be developed to alleviate future supply shortages, pay its fair-share towards necessary water system facilities, construct water system capacity-enhancing improvements/upgrades to support the proposed development's water infrastructure needs, and submit final onsite water system design specifications and construction plans for approval by the City. These plans would also include connections to and extension of recycled water infrastructure that is now completed and in progress adjacent to the DTPP. It is anticipated that the new recycled water supply main(s) for the amended DTPP area would likely extend from the closest existing or planned extension of the City's recycled water system to serve one or more individual projects in the amended DTPP area.

Individual development projects would also be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers be weather- or soil moisture-based and automatically account for rainfall, or be attached to a rainfall sensor. Implementation of water conservation and efficiency measures would minimize the potable water demand generated and lessen the need for capacity or other improvements to the water system.

Water system impacted by new private development as a result of the proposed DTPP Plan-Wide Amendments would lead to water system capacity-enhancing improvements funded and/or constructed by private developers. Water system improvements (including connection to recycled water infrastructure) would be completed as a component of a future development, as described further in the context of water supplies, and would involve ground disturbance to currently developed land (generally within roadways or public rights-of-way). At a minimum, it is anticipated that improvements would be required to supply recycled water to the amended DTPP area, which currently lacks a recycled water supply (as stated above in Section 10.1), and is addressed in further detail in the discussion regarding Impact UT-2 below. Upsizing the water main and/or extending the recycled water utility to new development in the amended DTPP area would have short-term construction disturbance, but no further environmental impacts due to water

system improvements would be generated beyond those identified and addressed elsewhere in this SEIR for overall construction activity associated with the proposed DTPP Plan-Wide Amendments (e.g., Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*). (See additional discussion under Mitigation Measure UT-2 to reduce impacts of Impact UT-2.)

Future development projects within the amended DTPP area would also be required to meet the required fire flow velocities and flow durations pursuant to the California Fire Code and Redwood City Engineering Standards. Subsequent development projects would be required by City codes to take typical fire and safety precautions, such as prohibiting on-site fires; reporting any fires, even if they have been extinguished; discarding any smoking materials in approved containers; maintaining access to emergency vehicles; and maintaining access to fire hydrants, emergency water tanks, and emergency turnouts. However, according to City staff, the transmission and distribution systems are not sized to provide adequate flows and pressures under emergency service for future citywide development.⁴¹ Accordingly, Mitigation Measure UT-1 would be required to increase the reliability of emergency water supplies.

Emergency water storage volume for emergency uses in a fire, earthquake, or a temporary shutdown of the SFPUC system is also inadequate. In case of an emergency, subsequent development projects in the amended DTPP area could contribute to a deficit in emergency water supply. Accordingly, new Mitigation Measure UT-1, which would require each subsequent development project to make a fair-share contribution to development of an emergency water supply for Downtown, would be applicable to each subsequent development projects in the amended DTPP area would be required by make a fair-share payment toward construction of planned new emergency water facilities to serve Downtown Redwood City. This water storage system would provide for water supplies in the case of drought and disaster-caused emergencies, such as a temporary interruption of water supplies due to an earthquake.

Mitigation Measure UT-1a: Emergency Water Storage: All subsequent development projects in the amended DTPP area, regardless of size, shall pay a fair-share contribution towards the cost of providing emergency water storage for all proposed uses to fund the design and construction of such storage. City staff would determine the fair share contribution based on a ratio of each project's equivalent dwelling unit demand for emergency water storage compared to the total demand.

Mitigation Measure UT-1b: Water System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing water mains have sufficient pressure and flow for the project's demands

⁴¹ The demonstrated need to construct emergency potable water storage tank is described and documented in the following reports: "A Technical Report on the City Water Storage Capability," Redwood City Community Development Services and Public Works Services Department staff, December 24, 1997; "Preliminary Engineering Report--Municipal Services Center (MSC) Water Storage Tank and Pumping Station," Thomas Yeager, P.E., of Kennedy/Jenks Consultants, Palo Alto, March 27, 2002; "Main City Pressure Zone Emergency Water Supply Report," Chu Chang, P.E., Phong Du, P.E., and Tonia Tabucchi, of Redwood City staff, August 2003; "Water System Master Plan", West Yost & Associates, October 2011. The Main City water service area, which includes the amended DTPP area, has a documented need for 6.32 million gallons of emergency water storage to provide emergency water supply for maximum day demand and fire flow.

(including but not limited to domestic and fire demands). To the extent such infrastructure is not already within a capital improvement program, any water system capacity-enhancing improvements needed to provide sufficient pressure and flow to meet the project's demands shall be funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.

It is noted that potential impacts from implementation of these mitigation measures are discussed in Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*.

Significance after Mitigation: Less than Significant (New significant but mitigable impact, compared to DTPP Final EIR)

Wastewater

The DTPP Final EIR found that the DTPP would not result in any wastewater capacity exceedances, and impacts were determined to be less than significant.

The City operates a sanitary sewer system that consists of sewer pipelines, manholes, force mains, and lift stations. SVCW also has an approximately nine-mile influent force main pipeline that conveys wastewater from Redwood City to the Redwood City pump station, and ultimately the wastewater treatment plant (see Impact UT-3 below for analysis related to wastewater treatment plant capacity). Redwood City collects wastewater treatment capacity fees from new construction projects which result in an added wastewater burden and reimburses SVCW for costs expended on the operation, capital repairs, and maintenance related to the City's service areas. Additional redevelopment is projected in the future, which will further increase wastewater flows and may create additional capacity constraints. As such, development as a result of the proposed DTPP Plan-Wide Amendments would be subject to constructing sewer system capacity-enhancing improvements and providing capacity fees that would be collected by the City to address the new wastewater demand.

Development within the amended DTPP area would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. Implementation of water conservation and efficiency measures would reduce the wastewater generated.

Sewer system impacted by new private development as a result of the proposed DTPP Plan-Wide Amendments would lead to sewer system capacity-enhancing improvements funded and/or constructed by private developers. As a standard condition of approval for private development

projects, the City requires that, prior to issuance of any encroachment permit, the project applicant must submit to the City, and obtain approval of, an evaluation and report prepared by a licensed engineer demonstrating that the existing sewer mains have sufficient capacity for the project. The study shall consider existing, project, other approved projects, and applications currently under review in determining the needed capacity. If the existing sewer main is less than 6 inches in size, or is in any other way not sufficient as determined by the City Engineer, the project applicant shall, as part of the proposed development project, construct and install new sewer mains sufficient to meet such requirements, in accordance with the City's Engineering standards and as directed by the City Engineer to the City Engineer's satisfaction.

Sewer capacity improvements would likely be completed as a component of a future development and would involve ground disturbance to currently developed land (generally within roadways or within public rights-of-way). As with the extension of recycled water infrastructure described above, limited and temporary effects of sewer capacity construction would be similar to those of routine utility projects and would be less than significant. Because the utility extension would occur underground and within existing roadways and rights-of-way no other construction or operational impacts are anticipated from the sewer system capacity-enhancing improvements that may be necessitated by future development.

Mitigation Measure UT-1c: Sanitary Sewer System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing sewer mains have sufficient capacity for the project's demands. To the extent such infrastructure is not already within a capital improvement program, any sewer main(s) shown to have insufficient capacity pursuant to the City's Engineering Standards shall lead to sewer system capacity-enhancing improvements funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.

It is noted that potential impacts from implementation of these mitigation measures are discussed in Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*.

Significance after Mitigation: Less than Significant (New significant but mitigable impact, compared to DTPP Final EIR)

Stormwater

The DTPP Final EIR found that individual projects developed within the DTPP would include replacing existing developed areas with new development, and although residential and commercial densities would increase, there would be minimal difference between the DTPP buildout scenario and existing conditions in terms of stormwater runoff. No areawide drainage improvements were anticipated, and the DTPP was found to potentially result in a reduction of stormwater runoff, due to increased landscaping and City's runoff retention requirements. As a result, impacts on storm drainage infrastructure were determined to be less than significant.

The City owns and maintains the stormwater system in Redwood City. Future development projects as a result of the proposed DTPP Plan-Wide Amendments would be subject to the City's Stormwater Management and Discharge Control Program Ordinance (Municipal Code Chapter 27A).

As part of the review process for individual development projects which create or replace 10,000 square feet of impervious surface area, preparation of a stormwater control plan would be required. In addition, projects recreating or replacing an acre or more of impervious area (unless exempted) must also provide flow controls (or hydromodification management measures) so that post-project runoff does not exceed estimated pre-project rates and durations. Regulated projects for which building or grading permits are issued must include Low Impact Development (LID) design measures (such as pervious paving or bioretention areas) for stormwater capture and pretreatment.

Redwood City Municipal Code Chapter 27A contains regulatory requirements for stormwater management and discharge control. Projects developed as a result of the proposed DTPP Plan-Wide Amendments would be required to implement stormwater treatment measures that would control stormwater flow volumes and improve stormwater quality. Stormwater treatment measures proposed as part of a project's permanent stormwater pollution prevention measures onsite and offsite are also required to be designed in accordance with the City's Green Infrastructure Plan. The stormwater treatment plans submitted for projects would be subject to City engineering review and approval.

Stormwater drainage system impacted by new private development as a result of the proposed DTPP Plan-Wide Amendments (including but not limited to proposed stormwater culvert realignment) would lead to capacity-enhancing improvements funded and/or constructed by private developers. Stormwater drainage system improvements would likely be completed as a small component of a future development and would involve ground disturbance to currently developed land (generally within roadways or within public rights-of-way). As with the extension of recycled water infrastructure described above, limited and temporary effects of stormwater drainage system construction would be similar to those of routine utility projects and would be less than significant. No other construction or operational impacts are anticipated from the stormwater drainage system capacity-enhancing improvements that may be necessitated by future development.

Mitigation Measure UT-1d: Stormwater System Upgrades: All subsequent development projects in the amended DTPP area, regardless of size, shall submit to the City, and obtain approval of, an evaluation and report prepared by licensed engineer demonstrating that the existing stormwater system has sufficient capacity for the project's demands. To the extent such infrastructure is not already within a capital improvement program, any stormwater main(s) shown to have insufficient capacity pursuant to the City's Engineering Standards shall lead to stormwater system capacity-enhancing improvements funded and/or constructed by private developers. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.

It is noted that potential impacts from implementation of these mitigation measures are discussed in Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*.

Significance after Mitigation: Less than Significant (New significant but mitigable impact, compared to DTPP Final EIR)

Electricity, Natural Gas, and Telecommunications Facilities

The DTPP Final EIR did not specifically identify impacts to electricity, natural gas, and telecommunications facilities. PG&E and PCE provide electric service in the City, and PG&E provides natural gas service. The telecommunications system serving the City of Redwood City consists of aboveground and buried telecommunications circuits from several providers, primarily AT&T and Comcast. New meter and service connections would be coordinated with the provider at the time new development is proposed. As discussed in Chapter 13, *Climate Change*, future development would also be subject to a suite of programs and regulations that would reduce energy use.

Energy and telecommunication system improvements would likely be completed as a small component of a future development and would involve ground disturbance to currently developed land (generally on redevelopment sites, within roadways, or within public rights-of-way). As with the extension of recycled water infrastructure described above, limited and temporary effects of such construction for electricity, natural gas and telecommunications facilities would be similar to those of routine utility projects and would be less than significant. Because the utility relocation would occur underground and/or within existing roadways and rights-of-way, potential impacts from implementation are discussed in Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*. No other construction or operational impacts are anticipated from these improvements that may be necessitated by future development.

Summary

Overall, the potential replacement or extension of utility infrastructure to serve development as a result of the DTPP Plan-Wide Amendments would be installed primarily in existing roadways and utility rights-of-way. Aside from short-term construction disturbance, no unusual or further environmental impacts would be generated beyond those identified elsewhere in this Draft SEIR for overall construction activity associated with the DTPP Plan-Wide Amendments (e.g. Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*, Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*). For these reasons, and because changes proposed to utilities infrastructure as part of future developments will be subject to the City’s review and permitting process, the proposed DTPP Plan-Wide Amendments would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. The proposed DTPP Plan-Wide Amendments would result in a new impact not identified in the DTPP Final EIR due to the identified need for emergency water supply; however, with mitigation, this impact would be reduced to a *less-than-significant level*. Therefore, impact would be *less than significant with mitigation*.

Impact UT-2: Implementation of the DTPP Plan-wide amendments would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. (*Less than Significant with Mitigation*)

Redwood City’s 2005 UWMP was used as the basis for the water supply analysis in the DTPP Final EIR, which found that the 2005 UWMP accounted for projected growth within the DTPP and concluded that adequate water supply was available to serve proposed growth. Accordingly, the DTPP Final EIR determined that the DTPP would have no impact related to water supply.

The proposed DTPP Plan-Wide Amendments would result in an increase in population on the project site and thus an increased demand for water. The project would use water provided by the City, which has multiple sources of water, as discussed in Section 10.1.1, including potable water from the SFPUC RWS and recycled water from SVCW. A Water Supply Evaluation, modeled after the requirements of SB 610, was prepared for the proposed DTPP Plan-Wide Amendments by West Yost on behalf of the City of Redwood City.⁴²

The projected water demand associated with the proposed DTPP Plan-Wide Amendments is 126.2 AFY of potable water and 244.7 AFY of recycled water. The water demand projections for the proposed DTPP Plan-Wide Amendments include both potable and recycled water uses to conform to the requirements of Redwood City’s Municipal Code. As stated above, the Code requires that all new commercial and multi-family residential properties located within the City’s recycled water service area—which includes the entirety of the DTPP area—must be dual plumbed to provide for internal use of recycled water and must also use recycled water for any landscape irrigation (in common areas only for residential projects). As stated above in

⁴² West Yost, 2022. *Downtown Precise Plan (DTPP) Plan-Wide Amendments Project Water Supply Evaluation*, November 2022 (Appendix E).

Section 10.2.16, *Redwood City UWMP*, the City's UWMP assumes future development within the Recycled Water Service Area—including the entirety of the DTPP—would have indoor water demand ratios of 70 percent potable/30 percent recycled for residential uses and 20 percent potable/80 percent recycled for office/R&D uses, with all landscaping irrigation assumed to be with recycled water.

The potable/recycled water ratio for indoor water use is estimated to be 20/80 percent for office and R&D Laboratory uses and 70/30 percent for residential uses, based on historical meter readings for existing dual plumbed projects. All landscaping water demand projected for the amended DTPP area would be supplied by recycled water, as required under Redwood City Municipal Code Section 38.52. Achievement of these shares of recycled water in the proposed amended DTPP area would require the extension of the City's recycled water main system into the amended area, as required by Mitigation Measure UT2, below.

Mitigation Measure UT-2: Recycled Water Infrastructure: The developer of all subsequent development projects in the amended DTPP area, regardless of size, shall be required to install an extension of recycled water supply pipelines to each development project with sufficient recycled water capacity to provide for all of the project's recycled water demands while achieving the required pressure, flow, and other design criteria of recycled water system pursuant to City of Redwood City standards. Any owner or subdivider of real property required by the City to bear the cost of constructing or installing improvements that include supplemental size, capacity, numbers or length that benefit or benefits property not owned by said owner or not within said subdivider's subdivision, may be reimbursed by subsequent development projects within the amended DTPP area, which must pay a fair-share contribution, in the manner provided for by the City's Reimbursement Agreements Ordinance or other applicable fair-share reimbursement mechanism(s). If the City adopts a development impact fee or other funding mechanism related to such infrastructure, the City may revise this mitigation measure if the fee program or mechanism is determined by the City to be equally effective substitute mitigation.

It is noted that potential impacts from implementation of this mitigation measure are discussed in Chapter 9, *Transportation*; Chapter 11, *Noise and Vibration*; Chapter 12, *Air Quality*; and Chapter 13, *Climate Change*.

The City's most recently adopted UWMP is the 2020 UWMP, which was adopted in June 2021. The City's 2020 UWMP incorporated the future population, employment and water demand projections for buildout of the City's 2010 General Plan, as well as the water demands associated with several other proposed development projects, whose addition would require a General Plan amendment. The projected water demand for the proposed DTPP Plan-Wide Amendments is included in the City's 2020 UWMP (UWMP Section 4.2.2 and Table 4-5).

In the City's 2020 UWMP, projected normal year supplies are shown to be adequate to satisfy the City's projected normal year demands. However, in the City's 2020 UWMP, and the WSA prepared for the proposed DTPP Plan-Wide Amendments, the City's purchased supplies from the SFPUC RWS assume dry year supply reductions as a result of the implementation of the Bay-Delta Plan Amendment, which significantly reduces dry year allocations for SFPUC wholesale customers

(including the City). Recycled water is estimated to be available during all hydrologic years at a volume that meets the City's projected recycled water demands. However, because of the uncertainties surrounding the implementation of the Bay-Delta Plan Amendment (detailed in Section 10.2.15), the WSA described findings for two scenarios, one assuming the Bay-Delta Plan Amendment is implemented and one assuming that the Bay-Delta Plan Amendment is not implemented.

Under the scenario in which the Bay-Delta Plan Amendment is implemented, substantial supply shortfalls are projected in dry years for all agencies that receive water supplies from the SFPUC RWS. For the City, supply shortfalls are projected in single dry years (ranging from 32 to 40 percent) and in multiple dry years (ranging from 32 to 47 percent) through 2045.

If supply shortfalls do occur, the City expects to meet these supply shortfalls through water demand reductions and other shortage response actions by implementation of its WSCP.

Other actions that the City would take include coordination with other agencies, implementing water rate incentives and penalties, increasing water waste patrols, etc. With implementation of the Bay-Delta Plan Amendment, the projected single dry year shortfalls would require implementation of Stage 4 of the City's WSCP, and the projected multiple dry year shortfalls would require implementation of Stage 4 or 5 of the City's WSCP. Consistent with California Water Code (CWC) §10632, the WSCP includes six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent of demand, identifies a suite of demand reduction measures for the City to implement at each level, and identifies procedures for the City to annually assess whether or not a water shortage is likely to occur in the coming year, among other things.

Each stage of the WSCP imposes a series of drought response actions, some of which become stricter in succeeding phases. So, for example, at Stage 1, outdoor residential watering is limited to 15 minutes per day, three days per week, while by Stage 3, the limit is 10 minutes per day, once per week, and in Stage 5, outdoor residential watering is prohibited altogether. At each drought stage, the WSCP establishes an overall water use budget for each residential and non-residential water customer. In Stage 1, as an example, residential customers are budgeted to use indoor water at a rate of 50 gallons per person per day (gpcd). This water use budget decreases by drought stage, to 40 gpcd in Stage 3 and to 27 gpcd by Stage 6. Non-residential water customers are budgeted for reductions from baseline water use of, for example, 3 percent in Stage 1, 10 percent in Stage 3, and 35 percent by Stage 6. According to the WSCP, enforcement will focus on "soliciting cooperation from water customers who are unaware of the restrictions or have failed to comply with" the WSCP. As such, a main focus of the City's planned demand reduction measures is to increase public outreach and keep customers informed of the water shortage emergency and actions they can take to reduce consumption. However, in the event of non-cooperation, the City may take enforcement action, ranging from warnings to fines, increasing by violation, and to discontinuance of water service after a fifth violation. Other actions that the City would take include coordination with other agencies, implementing water rate incentives and penalties, increasing water waste patrols, etc.

As shown in **Table 10-1**, with implementation of the WSCP, the City would be able to reduce the difference between water demand and supply (the shortage) for each stage of a drought emergency.

**TABLE 10-1
ESTIMATED WATER USE REDUCTION UNDER WATER SHORTAGE CONTINGENCY PLAN**

Drought Stage	Reduction Goal	WSCP Reduction of Shortage
Stage 1	Up to 10%	5%
Stage 2	Up to 20%	15%
Stage 3	Up to 30%	25%
Stage 4	Up to 40%	35%
Stage 5	Up to 50%	45%
Stage 6	Greater than 50%	55%

SOURCE: 2020 Urban Water Management Plan for City of Redwood City, June 2021, Tables 8-1 and 8-2.

Like all water users in Redwood City, development within the amended DTPP area would be subject to water use limitations in the WSCP in the event of water shortages resulting from dry years and implementation of the Bay-Delta Plan Amendment, should such limitations be imposed.

With implementation of the Bay-Delta Plan Amendment, the projected single dry year shortfalls (of 32 to 40 percent) would require implementation of Stage 4 or 5 of the City’s WSCP, which, according to Chapter 8 of the UWMP, would reduce the shortage by 35 and 45 percent, respectively. The projected multiple dry year shortfalls (of 32 to 47 percent) would require implementation of Stage 4, 5, or 6 of the City’s WSCP, which would reduce the shortage by up to 55 percent. Each stage of the City’s WSCP requires declaration by the City Council once a governing body, such as SFPUC, has required a voluntary or mandatory reduction in water use due to water supply shortages or an emergency. Each stage includes implementation of a mandatory water allocation program, voluntary restrictions on end uses, as well as various agency actions. These shortfall projections likely underestimate the potential supply that will be available in the future because they do not account for any new water supplies from the SFPUC’s Alternative Water Supply Planning Program.

Under the scenario in which the Bay-Delta Plan Amendment is not implemented, the total projected water supplies determined to be available in single dry years and multiple dry years are only slightly lower than the projected water demand associated with the City’s existing and planned future uses, including the proposed amended DTPP area, through 2045. These projected supply shortfalls are significantly less than the projected supply shortfalls if the Bay-Delta Plan Amendment is implemented. This includes both single dry years (shortfalls ranging from 1 to 2 percent) and multiple dry years (shortfalls ranging from 1 to 11 percent). Based on SFPUC’s analysis, a supply shortfall of 11.1 percent is projected during the fourth and fifth consecutive dry years in 2045. If supply shortfalls do occur, the City expects to meet these supply shortfalls through water demand reductions and other shortage response actions by implementation of the City’s WSCP. Without implementation of the Bay-Delta Plan Amendment, the projected single dry year shortfalls would require implementation of Stage 1 of the City’s WSCP, and the

projected multiple dry year shortfalls would require implementation of Stage 1 or 2 of the City's WSCP, which would reduce the shortage by up to 15 percent.

In addition, SB 221 applies to proposed residential developments of over 500 dwelling units and requires that the water supplier provide a written verification that the water supply for the project is sufficient, prior to issuance of the final permits. Because the proposed DTPP Plan-Wide Amendments would increase the assumed number of Downtown residential units, by approximately 830 units, individual projects may be subject to the requirements of SB 221 (Government Code section 66473.7) and a verification of sufficient water supply (SB 221) report would be required prior to final approvals for projects with 500 or more residential units.

Projects developed within the amended DTPP area would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers be weather- or soil moisture-based and automatically account for rainfall, or be attached to a rainfall sensor. Additionally, Redwood City Municipal Code Section 38.52 requires all new and existing commercial properties and new multi-family residential properties to use recycled water for irrigation. Implementation of water conservation and efficiency measures and use of recycled water would minimize the potable water demand generated by the proposed DTPP Plan-Wide Amendments. These potential savings were not considered in the Water Supply Assessment, which is therefore conservative.

Because water savings in excess of the deficit created by the project can be achieved (with or without implementation of the Bay-Delta Plan Amendments) using the City's WSCP stages, the project will have sufficient water, so long as recycled water infrastructure is extended, which is addressed by Mitigation Measure UT-2. The proposed DTPP Plan-Wide Amendments would not contribute to dry year water supply shortages because the City's 2020 Urban Water Management Plan included projected water demand sufficient to accommodate growth associated with the proposed amendments and the customers in the amended DTPP area would be subject to the same drought-related curtailments as the City's other customers. Subsequent development projects within the amended DTPP area would use less water per capita than many existing developments due to the obligation to install water efficient fixtures and use recycled water. As a result, this planned growth would not cause the City to increase curtailments. And, as noted above, subsequent projects developed in the amended DTPP area would be required to pay applicable City development and water capacity fees, contribute fees to any SFPUC RWS Alternative Water Supply Planning Program funding mechanism that may be developed to alleviate future supply shortages, and pay its fair-share towards necessary water system facilities. For these reasons, the City would have sufficient water supplies to accommodate the growth assumed under the proposed DTPP Plan-Wide Amendments.

As noted above, the DTPP Final EIR determined that the DTPP would have no impact related to water supply. The proposed DTPP Plan-Wide Amendments would result in new, more severe impacts than what was previously identified in the DTPP Final EIR for water supply. However, implementation of new Mitigation Measure UT-2 would reduce the identified impact to a *less-than-significant* level.

Significance after Mitigation: Less than Significant (New significant but mitigable impact, compared to DTPP Final EIR)

Impact UT-3: Implementation of the DTPP Plan-Wide Amendments would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant*)

The DTPP Final EIR found that the available treatment capacity at the South Bayside System Authority's wastewater treatment plant would be adequate to meet the net increase in generation from the DTPP, and impacts were determined to be less than significant. Since adoption of the DTPP, the South Bayside System Authority has transitioned to SVCW.

Development within the amended DTPP area would result in an increase in population and thus an increased demand for wastewater treatment. SVCW collects and treats wastewater from the City of Redwood City, as discussed in Section 10.1, *Environmental Setting*.

SVCW's treatment plant has a permitted dry weather capacity of 29 MGD and a peak wet weather flow capacity of 71 MGD.⁴³ In 2017, the SVCW Commission approved the Regional Environmental Sewer Conveyance Upgrade Program, which consists of replacing or rehabilitating various components of the existing wastewater treatment and conveyance system, including pipelines and pump stations to ensure reliable operation of the overall wastewater system.⁴⁴ Redwood City collects wastewater treatment capacity fees from new construction projects which result in an added wastewater burden to ensure that new users pay their fair share for facilities and necessary capacity upgrades, and reimburses SVCW for costs expended on the operation, capital repairs, and maintenance related to the City's service areas. As such, upgrades are being added at SVCW's wastewater treatment plant, SVCW is carrying out additional capital improvements as funds become available, and capacity fees would be collected by the City to address the new wastewater demand.

The treatment plant's current average daily flow is 12-14 MGD.⁴⁵ Based on the indoor water demand calculated in the WSA prepared for the proposed DTPP Plan-Wide Amendments, the addition of 830 residential units and 1,167,100 square feet of office uses as a result of the proposed DTPP Plan-Wide Amendments would generate approximately 274,829 gallons of wastewater per day or approximately 0.27 MGD, based on the assumption that 95 percent of water use becomes wastewater, representing less than 2 percent of the 15-17 MGD excess average daily capacity of

⁴³ San Francisco Bay Regional Water Quality Control Board (RWQCB), 2021. Subject: Review of 2019 Local Limits Assessment, July 2, 2021. Available online: https://svcw.org/wp-content/uploads/2021/08/2019_SVCW_Local_Limits_Verification_Report.pdf. Accessed February 22, 2022.

⁴⁴ Silicon Valley Clean Water (SVCW), 2022a. Regional Environmental Sewer Conveyance Upgrade (RESCU) Program Overview. Available online: <https://svcw-rescu.org/rescu-program-overview/>. Accessed February 22, 2022.

⁴⁵ SVCW, 2022b. Phone communication regarding daily average treatment plant flow, February 24, 2022.

the treatment plant.⁴⁶ Therefore, the proposed DTPP Plan-Wide Amendments' estimated wastewater generation would be adequately served by the SVCW wastewater treatment plant.

The methodology for calculating the fair share contribution is described in a report to City Council dated December 6, 2010, wherein the methodology was proposed for the Kaiser Hospital project at 1150 Veterans Boulevard and accepted by City Council. Additionally, development as a result of the proposed DTPP Plan-Wide Amendments would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures, such as high-efficiency toilets, urinals, showerheads, and faucet fixtures. Implementation of water conservation and efficiency measures would minimize the wastewater generated.

Since the SVCW treatment plant would have adequate capacity to serve the demand as a result of the proposed DTPP Plan-Wide Amendments, the proposed DTPP Plan-Wide Amendments would not result in wastewater treatment capacity issues and would not result in new or more severe impacts than impacts identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

Impact UT-4: Implementation of the DTPP Plan-Wide Amendments would not 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. (*Less than Significant*)

The DTPP Final EIR found that the DTPP would not generate an inordinate volume of solid waste (i.e., a rate inconsistent with adopted land use plans, policies, or regulations) and the Ox Mountain Landfill would have sufficient capacity to serve the DTPP. As a result, the DTPP Final EIR determined impacts related to solid waste to be less than significant.

Construction

During construction of individual projects as a result of the proposed DTPP Plan-Wide Amendments, construction-related debris would be generated. Projects developed within the amended DTPP area would be required to comply with existing solid waste reduction requirements, including applicable federal, State and local solid waste statutes and regulations during construction. As described in Section 10.2, *Regulatory Setting*, Redwood City requires development projects to achieve at least 65 percent diversion under the C&D Ordinance and CALGreen Code, and full demolition projects would be required to divert 100 percent of inert material (asphalt, brick, concrete, dirt, fines, rock, sand, soil, and stone). Projects are also required to create and maintain a construction waste management plan. The diversion requirement

⁴⁶ Calculations based on City engineering factors and assumes up to 30 percent of office could be R&D Laboratory space: Total office wastewater demand = 816,970 sq. ft. x 0.13 gpd/sq. ft. x 95% = 100,896 gpd; Total R&D Laboratory wastewater demand: 350,130 sq. ft. x 0.21 gpd/sq. ft. x 95% = 69,851 gpd; Total residential wastewater demand = 1,826 residents x 60 gpd per person x 95% = 104,082 gpd.

may be met through direct facility recycling, reuse of the materials on site, or donation to reuse and salvage businesses.

The Ox Mountain Landfill serves the City and accepts mixed construction and demolition waste. The remaining residue from the materials that cannot be recovered would be landfilled. The Ox Mountain Landfill has an estimated 17,240,000 cubic yards of remaining capacity (19,826,000 tons) and an expected closure date of 2034. Project construction is not expected to generate substantial amounts of solid waste during construction relative to the remaining capacity of the Ox Mountain Landfill. Therefore, construction associated with the proposed DTPP Plan-Wide Amendments would not generate solid waste in excess of local infrastructure and would not impair the attainment of state-level or local waste reduction goals. This impact would be *less than significant*, the same as found for the DTPP Final EIR.

Operation

During operation of individual projects developed as a result of the proposed DTPP Plan-Wide Amendments, the additional development would result in an increase in the demand for solid waste services. This SEIR assumes that the proposed DTPP Plan-Wide Amendments would indirectly result in development of up to 830 residential units and 1,167,100 square feet of office space which would generate solid waste. With the addition of 1,826 potential residents and 4,555 employees (see Chapter 5), the residential uses would generate up to approximately 4.7 tons of waste per day and the proposed office uses would generate up to approximately 15.5 tons of waste per day.⁴⁷ Together, approximately 20.2 tons per day (or 7,373 tons of waste per year) could be generated as a result of the proposed DTPP Plan-Wide Amendments. The Ox Mountain Landfill is permitted to accept 3,598 tons of waste per day and currently averages approximately 1,650 tons of solid waste per day. The Ox Mountain Landfill has approximately 17,240,000 cubic yards of remaining capacity (19,826,000 tons) and an expected closure date of 2034,⁴⁸ although the County's most recent review of the CIWMP in 2019 indicated that Ox Mountain Landfill had an estimated 19 remaining years of capacity. The County is currently revising the Siting Element of its CIWMP, which will identify facilities and proposed programs that would provide San Mateo County with sufficient disposal capacity to meet the required minimum of 15 years of combined permitted disposal capacity per the requirements of Public Resources Code Section 41260.⁴⁹ The daily solid waste estimates associated with the proposed DTPP Plan-Wide Amendments would account for less than 0.6 percent of the permitted daily capacity of the Ox Mountain Landfill, and as such the proposed DTPP Plan-Wide Amendments would not generate substantial amounts of solid waste during operation relative to the capacity of local infrastructure.

⁴⁷ The average disposal rate for the City in 2020 was 5.2 pounds per resident per day and 6.8 pounds per employee per day (CalRecycle, 2020). This represents a conservative estimate, as these rates include all residential and non-residential land uses. Multi-family residential and office uses typically generate lower rates as compared to single family residential and industrial or commercial uses (CalRecycle, 2022b).

⁴⁸ California Department of Resources Recycling and Recovery (CalRecycle), 2022. Application For Solid Waste Facility Permit and Waste Discharge Requirements, 5-Year Permit Review Application, February 4, 2022.

⁴⁹ County of San Mateo, 2019. Five-Year CIWMP/RAIWMP Review Report, November 12, 2019.

Projects developed as a result of the proposed DTPP Plan-Wide Amendments would be required to comply with existing solid waste reduction requirements, including applicable federal, State and local solid waste statutes and regulations during operation. Compliance with existing policies and regulations, including the CALGreen building and State recycling and organic material diversion requirements, would reduce the non-renewable sources of solid waste, and minimize the solid waste disposal requirements associated with the proposed DTPP Plan-Wide Amendments. Therefore, operation of development as a result of the proposed DTPP Plan-Wide Amendments would not generate solid waste in excess of the local infrastructure, and would not impair the attainment of state-level or local waste reduction goals. The proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, this would be *less than significant*.

Impact UT-5: Implementation of the DTPP Plan-Wide amendments would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (*Less than Significant*)

The DTPP Final EIR found that the DTPP would not generate an inordinate volume of solid waste (i.e., a rate inconsistent with adopted land use plans, policies, or regulations). As a result, the DTPP Final EIR determined impacts related to solid waste regulations to be less than significant.

During construction and operation associated with development as a result of the proposed DTPP Plan-Wide Amendments, development projects would be required to comply with federal, state, and local solid waste standards identified in Section 10.2, *Regulatory Setting*, such as the California Integrated Waste Management Act, AB 939, the CALGreen Code, AB 341 and AB 1826, SB 1383, and the City of Redwood City C&D Ordinance. Recology of San Mateo County oversees the collection, transfer, and disposal of residential garbage, recycling, and organics in the City, assisting with keeping the City compliant with state-mandated recycling requirements (AB 341 and AB 1826), including recycling of organics. As a result of these requirements and oversight, development within the amended DTPP area would not conflict with applicable waste reduction policies. Therefore, the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts regarding compliance with solid waste regulations than the impacts identified in the DTPP Final EIR. This impact would be *less than significant*.

Impact UT-6: Implementation of the DTPP Plan-Wide Amendments would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. (*Less than Significant*)

The DTPP Final EIR found that the DTPP would not create substantial impacts related to surface runoff as future development would replace existing developed areas, and there would be negligible change in the amount of impervious surfaces. The DTPP Final EIR determined that

there would be no increase in stormwater runoff and no area-wide drainage system improvements are anticipated.

The DTPP Final EIR analyzed both construction-related (short-term) and long-term water quality impacts and determined that construction site runoff and stormwater water runoff could substantially degrade water quality if not properly managed. In both cases, the DTPP Final EIR found that impacts to water quality would be adequately mitigated through required implementation of the City, County, and RWQCB requirements. Among these requirements is the NPDES General Construction Permit, which requires the preparation and implementation of a SWPPP. Implementation of the SWPPP is required by law and compliance is mandatory; established water quality regulations would reduce potential water quality impacts to a less-than-significant level. In addition, the operations of all new development would be required to comply with MS4s requirements to capture infiltrate, reuse, and/or treat stormwater falling on new developments.

Conclusions of the DTPP Final EIR remain valid for implementation of the DTPP Plan-wide amendments because the soil conditions are the same within the DTPP Plan-wide amendments boundary, and have not changed since the DTPP Final EIR. As discussed above, the DTPP Plan-wide amendments would be developed on previously developed land, and the change in impervious surfaces would be negligible. Further, the added landscaping would provide additional pervious surfaces to infiltrate and treat stormwater. While there could be additional soil disturbance as a result of future development within the amended DTPP area, runoff amounts would be similar to or less than what was analyzed for the area in the DTPP Final EIR and would therefore present a similar level of impact.

As described in Chapter 3, *Project Description*, the Gatekeeper project at 901 El Camino Real proposes relocation and alteration of approximately 170 feet of existing culvert and approximately 170 feet of existing open creek (Arroyo Ojo, a small creek that is otherwise completely culverted within downtown Redwood City). As explained in Chapter 15, *Biological Resources*, the exposed section of Arroyo Ojo is degraded and contains little in the way of natural conditions. Additionally, the proposed future improvements to Arroyo Ojo would be subject to review, approval, and likely imposition of conditions by various resource agencies, including potentially, the San Francisco Bay Regional Water Quality Control Board, U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and/or the U.S. Department of Fish and Wildlife. As a result, should the alterations to Arroyo Ojo be undertaken, it is not anticipated that they would result in violation of water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.

Compliance with SWPPP regulations would be sufficient to address impacts from the DTPP Plan-Wide Amendments as it relates to water quality issues as a result of polluted runoff from future ground disturbance. The proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, the impact would be *less than significant*.

Impact UT-7: Implementation of the DTPP Plan-Wide amendments would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. (*Less than Significant*)

The DTPP Final EIR determined that the DTPP would not have a significant impact on groundwater resources because Redwood City does not currently utilize groundwater as a supply source and does not intend to start in the future. The DTPP Final EIR further concluded that the DTPP would not interfere with groundwater recharge in the region because the DTPP will not result in a substantial increase in impervious surface area.

The City's Urban Water Management Plan (UWMP) was updated in 2021 and has since reconsidered the use of groundwater for municipal and irrigation purposes.⁵⁰ However, the DTPP Plan-Wide Amendments do not propose the use of the groundwater supply, and would redevelop an already urbanized area so that the amount of impervious surfaces would remain essentially the same. Moreover, it would be speculative to consider potential future effects thereof, as no definitive plans yet exist. For these reasons, the impacts on groundwater resulting from the DTPP Plan-Wide amendments would be similar to those identified in the DTPP Final EIR, and would not result in new or more severe impacts. The impact would be *less than significant*.

Impact UT-8: Implementation of the DTPP Plan-Wide Amendments would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; (iv) impede or redirect flood flows. (*Less than Significant with Mitigation*)

The DTPP Final EIR determined that the DTPP would not alter the existing drainage pattern of the area because all future developments would replace existing developed areas. As a result, the amount of runoff would not increase as a result of the DTPP. Further, because future developments would replace existing developments, the amount of impervious surface area would not be substantially increased. In addition, the operations of all new development would be required to comply with MS4s requirements to capture infiltrate, reuse, and/or treat stormwater falling on new developments, thus reducing the potential for erosion and flooding.

Although this SEIR assumes a potential future northerly expansion of the DTPP boundary, the extended area would comprise five additional parcels on which assumed development would replace existing developed areas. Additionally, most proposed infrastructure improvements would be within existing rights of way and subject to City review, ensuring no substantial changes to drainage patterns. The one exception would be alterations and realignment of Arroyo Ojo, discussed above under Impact UT-6. The proposed improvements would result in slightly larger

⁵⁰ City of Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City, adopted June 2021.

floodplain extents for the 30-year and 100-year design storms, compared to the existing conditions, which would be a new potentially significant effect, compared to the DTPP Final EIR. However, this impact would be reduced to a *less-than-significant* level with implementation of Mitigation Measure UT-8.

Mitigation Measure UT-8: Should the proposed realignment and alteration of Arroyo Ojo be undertaken, the City would require the project applicant to develop 2 acre-feet of detention storage on the project site to reduce water levels upstream and peak flows downstream of the 901 El Camino Real project site to achieve a 30-year level of service. The volume of detention reflects the volume of stormwater flow that would be spilled from existing on-site facilities and stored in the existing street network.

Significance After Mitigation: Less than Significant. (No new significant impact, compared to DTPP Final EIR)

Impact UT-9: Implementation of the DTPP Plan-Wide amendments would not result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. (*Less than Significant*)

The DTPP Final EIR determined that the amended DTPP area is not within the 100-year flood zone, although portions are within the 500-year flood zone. Due to the City's involvement in the National Flood Insurance Program, all new developments within a flood zone would be subject to specific flood damage avoidance requirements. The DTPP Final EIR further determined that the DTPP area is not within a tsunami zone or in an area at risk of inundation from a seiche.

The DTPP Final EIR determined that the impacts of the DTPP would be less than significant, as it relates to risks associated with a flood, tsunami, or seiche. This SEIR assumes a potential future northerly extension of the DTPP boundary but the area would remain outside of a 100-year flood zone and only portions would be within the 500-year flood zone. The proposed area would not extend into a tsunami or seiche hazard zone, and there would be no new or more severe impacts than what was identified in the DTPP Final EIR. Therefore, flood, tsunami and seiche hazards would be *less than significant*.

Impact UT-10: Implementation of the DTPP Plan-Wide amendments would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (*Less than Significant*)

The DTPP Final EIR determined that there would be less-than-significant impacts related to violating water quality standards and groundwater resources, which are included as goals and objectives in water quality control plans and sustainable groundwater management plans, because required implementation of City, County, and RWQCB regulations (including preparation of a SWPPP and compliance with MS4 requirements) would reduce any potential impacts to a less-than-significant level. Redwood City does not propose to utilize the groundwater supply for the

DTPP Plan-Wide Amendments, and future developments would not increase the amount of impervious surfaces. For these reasons, and because the proposed DTPP Plan-Wide Amendments would subject to the same City, County, and RWQCB requirements, the potential impacts from the proposed DTPP Plan-Wide Amendments to water quality control plans and sustainable groundwater management plans would not result in new or more severe impacts than what was identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

10.4 References

- California Department of Resources Recycling and Recovery (CalRecycle), 2022. Application For Solid Waste Facility Permit and Waste Discharge Requirements, 5-Year Permit Review Application, February 4, 2022.
- CalRecycle, 2021. California's 2019 Per Capita Disposal Rate Estimate, last updated February 17, 2021. Available: <https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/mostrecent>. Accessed March 11, 2022.
- CalRecycle, 2020. Jurisdiction Per Capita Disposal Trends, Redwood City, 2016-2020. Available: <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>. Accessed April 11, 2022.
- California Geological Survey (CGS), 2021. Tsunami Hazard Area Map for the County of San Mateo. California Geological Survey. March 23, 2021.
- County of San Mateo, 2019. Five-Year CIWMP/RAIWMP Review Report, November 12, 2019.
- Division of Safety of Dams (DSOD), 2019. Emerald Lake 1 Lower Dam Sunny Day Failure Inundation Map. Sheet 1 of 1. DSOD Dam #612.000. Department of Water Resources.
- Federal Emergency Management Agency (FEMA), 2019. National Flood Insurance Program, Flood Insurance Rate Map. San Mateo County, California and Incorporated Areas. Panel 301 of 510. Map Number 06081C0301F. Map. Scale 1:6,000.
- Pacific Gas and Electric Company (PG&E), 2022a. Economic Development Site Tool, Electric Transmission Lines. Available online: https://www.pge.com/en_US/large-business/services/economic-development/opportunities/sitetool.page. Accessed February 22, 2022.
- PG&E, 2022b. Explore our natural gas transmission pipeline map. Available online: https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.page. Accessed February 22, 2022.
- Redwood City, 2022. Peninsula Clean Energy. Available online: <https://www.redwoodcity.org/departments/public-works/environmental-initiatives/energy/peninsula-clean-energy>. Accessed February 22, 2022.
- Redwood City, 2021a. 2020 Urban Water Management Plan for City of Redwood City, adopted June 2021.

Redwood City, 2021b. Staff Report, Study Session on long term planning for City water, sewer and storm drain utilities, October 11, 2021. Available online: <https://meetings.redwoodcity.org/AgendaOnline/Documents/ViewDocument/STAFF%20REPORT.pdf?meetingId=2252&documentType=Agenda&itemId=6420&publishId=9325&isSection=false>. Accessed February 22, 2022.

Redwood City, 2019. Green Infrastructure Plan, June 2019. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/18796/637020675264700000>. Accessed February 22, 2022.

Redwood City, 2018. Sewer System Management Plan Revisions, March 2018. Available online: <https://new.thecity.redwoodcity.org/pub/onbase/siredl.ashx?fileid=241989>. Accessed February 22, 2022.

Redwood City, 2010. Redwood City New General Plan Draft Environmental Impact Report, May 2010.

San Francisco Bay Regional Water Quality Control Board (RWQCB), 2021. Subject: Review of 2019 Local Limits Assessment, July 2, 2021. Available online: https://svcw.org/wp-content/uploads/2021/08/2019_SVCW_Local_Limits_Verification_Report.pdf. Accessed February 22, 2022.

Silicon Valley Clean Water (SVCW), 2022a. Regional Environmental Sewer Conveyance Upgrade (RESCU) Program Overview. Available online: <https://svcw-rescu.org/rescu-program-overview/>. Accessed February 22, 2022.

SVCW, 2022b. Phone communication regarding daily average treatment plant flow, February 24, 2022.

SVCW, 2020a. Capital Improvement Program 2020 Update FY20-21 to FY29-30, January 2020. Available online: <https://svcw.org/wp-content/uploads/2020/08/2020-SVCW-CIP-Update.pdf>. Accessed February 22, 2022.

SVCW, 2020b. 2020-21 Operating Budget, Adopted April 20, 2020. Available online: <https://svcw.org/wp-content/uploads/2020/11/SVCW-FY2020-21-Budget-Adopted.pdf>. Accessed February 22, 2022.

CHAPTER 11

Noise and Vibration

This SEIR chapter analyzes the effects of the changes to noise and vibration that would result from implementation of the DTPP Plan-Wide Amendments, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Noise impacts assessed in the DTPP Final EIR included the DTPP area. The construction noise impact was identified as potentially significant in the DTPP Final EIR which then identified conditions of approval on all future projects involving demolition and construction activities (Mitigation Measure 11-4).

An operational noise impact was identified in the DTPP Final EIR with respect to impacts of the existing noise environment on proposed sensitive land use. Mitigation Measure 11-1 was identified in the DTPP Final EIR to require noise studies for proposed new multifamily residential project within the DTPP to identify noise reduction measures necessary to ensure achievement of the land use compatibility noise standards established in the *City Noise Element*.

The operational noise impact with respect to increases in roadside noise from traffic increases generated by implementation of the DTPP were identified as a less than significant impact in the DTPP Final EIR.

The construction vibration impact was identified as potentially significant in the DTPP Final EIR which then identified conditions of approval on all future projects involving demolition and construction activities (Mitigation Measure 11-3).

An operational vibration impact was identified in the DTPP Final EIR with respect to impacts of the existing environment on proposed sensitive land use. Mitigation Measure 11-2 was identified in the DTPP Final EIR to require vibration studies for proposed new habitable buildings within 100 feet of the Caltrain or California High Speed Rail right-of-way within the DTPP area to identify the need for vibration reduction measures necessary to ensure achievement of the vibration exposure standards established by the Federal Transit Administration.

11.1 Environmental Setting

11.1.1 Noise Principles and Descriptors

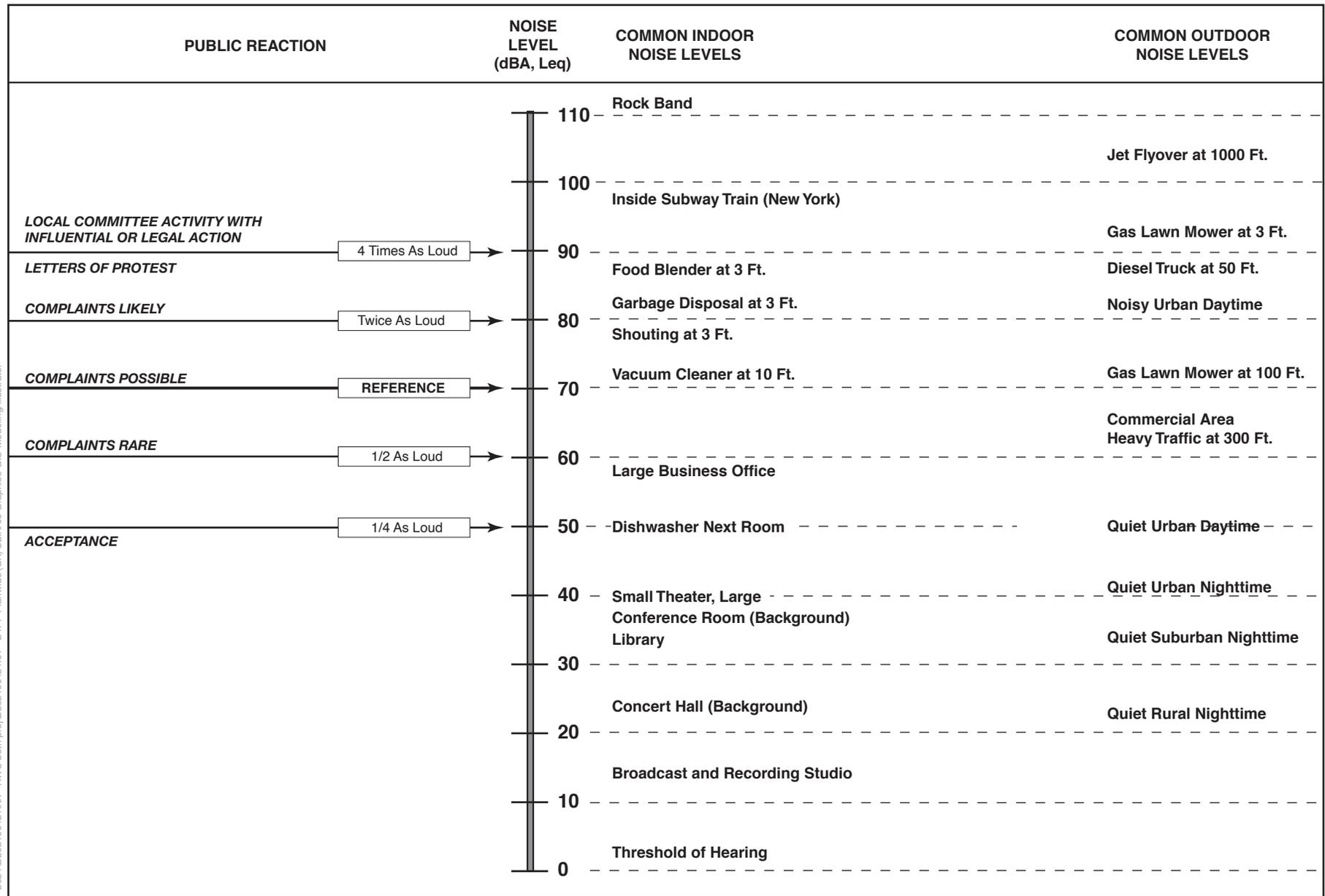
Noise is generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 and 140 dB corresponding to the thresholds of feeling and pain, respectively. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude. When all audible frequencies of a sound are measured, a sound spectrum is plotted, consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, during the assessment of potential noise impacts, sound is measured using an electronic filter that deemphasizes frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to extremely low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). A-weighting follows an international standard methodology for frequency de-emphasis and is typically applied to community noise measurements. **Figure 11-1** shows some representative noise sources and their corresponding A-weighted noise levels. All noise levels presented in this report are A-weighted unless otherwise stated.

11.1.2 Noise Exposures and Community Noise

An individual's noise exposure is a measure of noise over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented on Figure 11-1 are representative of measured noise at a given instant in time; however, they rarely persist consistently over a long period of time. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.



2021D202100421_XX - RWC both proj\202100421.01 - DTPP Planwide (GK) SEIR\05 Graphics-GIS-Modeling/Illustrator

SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982; and modification by ESA

DTPP Plan-Wide Amendments SEIR

Figure 11-1
Effects of Noise on People



These successive additions of sound to the community noise environment change the community noise level from instant to instant. Thus, noise exposure must be measured over a period of time to legitimately characterize a community's noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The following are the most frequently used noise descriptors:

- **L_{eq}**: The equivalent-continuous sound level, used to describe noise over a specified period of time in terms of a single numerical value. The L_{eq} of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. Also referred to as the “average sound level.”
- **L_{max}**: The maximum, instantaneous noise level experienced during a given period of time.
- **L_{min}**: The minimum, instantaneous noise level experienced during a given period of time.
- **L_{dn}**: The average A-weighted noise level during a 24-hour day that is obtained after 10 dBA are added to noise levels measured between 10 PM to 7 AM to account for nighttime noise sensitivity. Also referred to as the “day-night average noise level” (DNL). The L_{dn} is the metric used by the Noise Element of the *Envision San José General Plan* (General Plan) for assessing the land use compatibility of non-aviation sources.
- **CNEL**: The community noise equivalent level. This is the average A-weighted noise level during a 24-hour day that is obtained after 5 dBA are added to noise levels measured between 7 and 10 p.m. and 10 dBA are added to noise levels between 10 PM and 7 AM to account for noise sensitivity in the evening and nighttime, respectively. The CNEL metric is reported as a number and is generally understood to be in terms of A-weighted decibels. The CNEL is the metric generally used for assessment of aircraft noise. The result is normally about 0.5 dBA higher than L_{dn} using the same 24-hour data.¹

Noise Attenuation

Stationary “point” sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (e.g., atmospheric conditions and noise barriers, vegetative or manufactured). Widely distributed noise, such as that generated by a large industrial facility spread over many acres, or by a street with moving vehicles (known as a “line” source) would typically attenuate at a lower rate—approximately 3 to 4.5 dBA each time the distance doubles from the source, which also depends on environmental conditions.² Noise from large construction sites exhibits characteristics of both “point” and “line” sources, and attenuation will therefore generally range between 4.5 and 7.5 dBA each time the distance doubles.

¹ California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

² Ibid.

11.1.3 Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance)
- Interference effects (e.g., communication, sleep, and learning interference)
- Physiological effects (e.g., startle response)
- Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects of environmental noise refer to those effects that interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep. With regard to the subjective effects, the responses of individuals to similar noise events are diverse and are influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity.

Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur³:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change in noise levels is considered barely perceivable.
- A change in noise levels of 5 dB is considered readily perceivable.
- A change in noise levels of 10 dB is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in

³ Ibid.

a simple additive fashion, but rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dB, the combined sound level would be 53 dB, not 100 dB.

11.1.4 Fundamentals of Vibration

As described by the Federal Transit Administration (FTA) in the *Transit Noise and Vibration Impact Assessment*⁴, groundborne vibration can be a serious concern for the neighbors of a transit system route or maintenance facility, which can cause buildings to shake and rumbling sounds to be heard. In contrast with airborne noise, groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile driving, and operation of heavy earth-moving equipment.

Several different methods are used to quantify vibration. Peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. PPV is most frequently used to describe the impacts of vibration on buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (in vibration decibels [VdB]) is commonly used to measure RMS.

The relationship of PPV to RMS velocity is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. Peak particle velocity is typically a factor of 1.7 to 6 times greater than RMS vibration velocity.⁵ The decibel notation acts to compress the range of numbers required to describe vibration.

Typically, groundborne vibration generated by human activity attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The effects of groundborne vibration include movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, vibration can damage buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings. FTA’s measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inches per second (in/sec) PPV.⁶

In residential areas, the background vibration velocity level is usually around 50 VdB (approximately 0.0013 in/sec PPV, with a crest factor of 4). This level is well below the vibration-

⁴ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

⁵ *Ibid.*

⁶ *Ibid.*

velocity-level threshold of perception for humans, which is approximately 65 VdB. A vibration velocity level of 75 VdB is considered to be the approximate dividing line between barely perceptible and distinctly perceptible levels for many people.⁷

11.1.5 Existing Ambient Noise Levels

The DTPP area is located in Downtown Redwood City, in San Mateo County. The amended DTTP area is generally bounded by Veterans Boulevard, Maple Street, El Camino Real, and Brewster Avenue in Redwood City. The primary noise sources in the amended DTPP area are from automobile and truck traffic along downtown streets. Intermittent aircraft overflights and Caltrain activity are also audible.⁸ In addition, ambient noise is generated by existing commercial development throughout the area.

The southwestern portions of the amended DTPP area are located within an artery of regional transportation that influences the local noise environment. Within the amended DTPP area, the Redwood City Transit Center is a central passenger rail hub served by Caltrain with at-grade rail crossings at Broadway, Brewster Avenue and Maple Street that generate additional noise from warning bells and required horn blasts. Between San José and Redwood City, approximately 96 weekday passenger trains travel the rail line between 4:30 am and 1:30 am with additional traffic generated by freight trains. Noise from these operations substantially contributes to noise levels in the vicinity of the at-grade crossings as is demonstrated by the noise levels recorded below at monitoring location ST-9. However, this aspect of environmental noise setting is the same as was analyzed in the DTPP Final EIR and the CEQA guidelines have since been revised to preclude assessment of impacts of the environment on a proposed project except when a project exacerbates such an impact.

A series of long-term and short-term noise level measurements were conducted in the project vicinity in 2006 in support of the DTPP Final EIR to establish existing ambient noise conditions. Because of the age of these measurements, in support of this SEIR, short-term measurements were conducted in 2022 at the six previous long-term locations within the amended DTPP area to ascertain any changes in the noise environment at these locations from land use and transportation changes that may have occurred during the intervening years. Additionally, attended short-term measurements were conducted at six new locations and three previous locations to augment the other measurements within the amended DTPP area. Noise measurements were also taken near existing residential uses adjacent to and within the amended DTPP area as residential, day care and other noise sensitive uses may result from implementation of the DTPP Plan-Wide Amendments. The noise surveys were conducted using a Larson Davis Model LxT2 sound level meter that was calibrated before use and operated according to the manufacturer's written specifications. **Table 11-1** shows the measured average noise level (L_{eq}) during the monitoring period. **Figure 11-2** identifies the measurement locations.

⁷ *Ibid.*

⁸ This chapter of the SEIR refers to the "amended DTPP area" to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

**TABLE 11-1
EXISTING AND 2006 NOISE ENVIRONMENTS IN THE DTPP VICINITY**

Noise Monitoring Location	Noise Levels (dBA)			Primary Noise Sources
	2006 CNEL Noise Level ^a	2006 Daytime ^b Average L _{eq}	2022 Daytime Average L _{eq}	
ST-1: 1 Franklin Street at Jefferson Avenue. Mixed use with upper story residential.	NA	NA	68	Traffic on Jefferson Avenue and Caltrain
ST-2: 1201 El Camino Real at Jefferson Avenue (LT-2 in DTPP Final EIR)	74	72	69	Traffic on El Camino Real and Jefferson Avenue
ST-3: Franklin Street Apartments at Maple Street (LT-3 in DTPP Final EIR)	70	64	67	Traffic on Maple Street and Caltrain at-grade crossing
ST-4: City Hall Square (LT-6 in DTPP Final EIR)	60	57	51	Distant traffic on localized roadways
ST-5: Sequoia High School El Camino Real at James Avenue	NA	NA	72	Traffic on El Camino Real and James Avenue
ST-6: Triangle parklet on James Avenue near Caltrain parking lot	NA	NA	63	Traffic on El Camino Real and James Avenue and Caltrain
ST-7: California Avenue behind 2601 Broadway	NA	NA	60	Traffic on Broadway
ST-8: 75 Perry Street Apartments	NA	NA	68	Traffic on Perry Street and Caltrain at-grade crossing at Brewster Avenue
ST-9: Arguello Street 16 feet from Caltrain tracks (LT-1 in DTPP Final EIR)	79	71	74	Caltrain pass-by events, at grade crossing and traffic on Arguello Street and Broadway
ST-10: 1800 Broadway at Maple Street (ST-1 in 2010 DTPP DEIR)	NA	61	64	Traffic on Maple Street and Broadway
ST-11: 751-761 Brewster Avenue (ST-2 in 2010 DTPP DEIR)	NA	66	63	Traffic on Brewster Avenue
ST-12: On the corner of Commercial Way at Brewster Avenue (ST-3 in 2010 DTPP DEIR)	NA	71	68	Traffic on Brewster Avenue
ST-13: 690 Veterans Boulevard (LT-4 in 2010 DTPP DEIR)	67	NA	65	Traffic on Brewster Avenue and Veterans Boulevard
ST-14: 820 Veterans Plaza at Middlefield Road (LT-5 in 2010 DTPP DEIR)	72	NA	64	Traffic on Veterans Boulevard and Middlefield Road
ST-15: 23 Lisbon Lane	NA	NA	67	Traffic on El Camino Real

NOTES: dBA = A-weighted decibels; L_{eq} = equivalent-continuous sound level; CNEL = Community Noise Exposure Level;
NA = not applicable (these locations were not reported in the DTPP Final EIR)

^a Noise levels at ST-2, ST-3, ST-4, and ST-9 were monitored in support of the DTPP Final EIR

^b Daytime hours are considered to be 7 AM to 10 PM. Nighttime hours are considered to be 10 PM to 7 AM.

SOURCES: City of Redwood City, *Downtown Precise Plan Final EIR*, December 2010.
Environmental Science Associates noise survey, 2022 (Appendix D).



SOURCE: ESA, 2022; Google Earth, 2022

DTPP Plan-Wide Amendments SEIR

Figure 11-2
Noise Monitoring Locations

Additionally, existing roadside noise levels along roadway segments within the immediate vicinity of the amended DTPP area were modeled to provide estimates of existing weekday noise levels. **Table 11-2** presents existing roadside noise levels during the weekday peak commute hour. These modeled noise levels reflect only the noise generated by traffic on the identified roadway segments; they do not include other sources in the area, such as rail and aircraft noise where these other sources are nearby.

**TABLE 11-2
EXISTING TRAFFIC NOISE ALONG ROADWAYS IN THE AMENDED DTPP AREA VICINITY**

Roadway Segment	Existing Ldn (dBA)
Weekday Peak-Hour Noise Levels	
Maple St from El Camino Real to Main St	49
James Ave from Clinton St to El Camino Real	61
Jefferson Ave from Clinton St to El Camino Real	64
Jefferson Ave from El Camino Real to Sequoia Station	70
Broadway from El Camino Real to Perry St	60
Broadway from Perry St to Arguello St	62
Broadway from Arguello St to Winslow St	61
Broadway from Winslow St to Jefferson Ave	54
Broadway from Jefferson Ave to Main St	64
Broadway from Main St to Spring St	62
Marshall St from Arguello St to Winslow St	49
Brewster Ave from Fulton St to Broadway	54
Brewster Ave from Broadway to El Camino Real	49
Middlefield Road from Jefferson Ave to Main St	60
Middlefield Road from Main St to Maple St	63
Middlefield Road from Beech St to Chestnut St	61
Veterans Boulevard from Brewster Ave to Jefferson Ave	68
Veterans Boulevard from Jefferson Ave to Main St	63
Veterans Boulevard from Main St to Maple St	62
Winslow St from Marshall St to Brewster Ave	52

NOTE: dBA = A-weighted decibels

SOURCES: Traffic data compiled by Fehr & Peers in 2022, and noise modeling performed by Environmental Science Associates in 2022.

11.1.6 Existing Groundborne Vibration Levels

Sources of vibration in the project vicinity include Caltrain operations. FTA has published generalized ground-surface vibration curves for locomotive-powered passenger and freight trains (**Table 11-3**). Most Caltrain operations stop at the Redwood City Caltrain Station which results in train speeds along the eastern project boundary that are generally in the range of 5–30 miles per hour.

**TABLE 11-3
GENERALIZED VIBRATION LEVELS FROM LOCOMOTIVE-POWERED PASSENGER OR FREIGHT TRAINS
(VIBRATION DECIBELS AND PEAK PARTICLE VELOCITY)**

Train Speed	Vibration Velocity and Intensity at Distance from Tracks ^a				
	30 Feet	50 Feet	100 Feet	150 Feet	200 Feet
10 mph	74 VdB/0.051 PPV	71 VdB/0.040 PPV	62 VdB/0.019 PPV	60 VdB/0.016 PPV	58 VdB/0.013 PPV
20 mph	80 VdB/0.085 PPV	77 VdB/0.066 PPV	68 VdB/0.031 PPV	66 VdB/0.026 PPV	64 VdB/0.022 PPV
30 mph	84 VdB/0.12 PPV	81 VdB/0.092 PPV	72 VdB/0.043 PPV	70 VdB/0.037 PPV	68 VdB/0.03 PPV
50 mph	88 VdB/0.17 PPV	85 VdB/0.13 PPV	76 VdB/0.060 PPV	74 VdB/0.024 PPV	72 VdB/0.043 PPV

NOTES: MPH = Miles Per Hour; PPV = Peak Particle Velocity; VdB = Vibration Decibels

^a These levels reflect generalized diesel locomotive activity and do not reflect potential future reductions from electrification of Caltrain and increases from potential future High-Speed Rail operations.

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

The only other source of groundborne vibration in the project vicinity is travel by heavy-duty vehicles (e.g., refuse trucks, haul trucks) on local roadways. Trucks traveling typically generate groundborne vibration velocity levels of around 63 VdB (approximately 0.006 in/sec PPV) at a distance of 50 feet; these levels could reach 72 VdB (approximately 0.016 in/sec PPV) where trucks pass over discontinuities in the roadway.⁹

11.1.7 Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both the duration of exposure and insulation from noise) and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, and auditoriums generally are more sensitive to noise than are commercial and industrial land uses.

Working from north to south, the northernmost sensitive receptors adjacent to the amended DTPP area consist of new multifamily residences on the 600 block of El Camino Real and along the 700 block of Arguello Street. Additionally, there are multiple residential units (both single- and multi-family) along Brewster Avenue from Veterans Boulevard to Arguello Street. There are multi-family residential units on Veterans Boulevard between Middlefield Road and Jefferson Avenue.

Although the Sequoia High School campus is located south of Brewster Avenue and west of El Camino Real, the school uses adjacent to the amended DTPP area are primarily athletic fields, and academic buildings are located over 600 feet to the west of El Camino Real. There are single-family residential uses along James Avenue and on Arch Street, approximately 150 feet west of El Camino Real.

⁹ Federal Transit Administration, 2018 (see footnote 4, page 11-6).

To the south, there are multi-family residential units above ground floor commercial at One Franklin Street at the corner of Jefferson Avenue with additional multi-family residential extending along the east side of Franklin Street to Maple Street to the south. There is also a multi-family residential building at 1090 Main Street at the confluence with Maple Street and single-family residences along the southeast side of Maple Street between Middlefield Road and Spring Street.

11.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR. DTPP EIR Chapter 11, *Noise and Vibration*, Section 11.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.

The primary federal noise standards that directly regulate noise related to the operation of the proposed project pertain to noise exposure and workers. The U.S. Occupational Safety and Health Administration (US OSHA) enforces regulations to safeguard the hearing of workers exposed to occupational noise. The US OSHA has established worker noise exposure limits that vary with the duration of the exposure and require that a hearing conservation program be implemented if employees are exposed to noise levels in excess of 85 dBA.

Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Code of Federal Regulations (CFR) Title 40, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

11.2.1 Federal Transit Authority Vibration Standards

FTA has adopted vibration standards that are used to evaluate potential building damage impacts from construction activities. **Table 11-4** shows FTA's vibration damage criteria.

TABLE 11-4
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

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

SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

In addition, FTA has adopted standards related to human annoyance for groundborne vibration impacts for the following three land use categories: Vibration Category 1, High Sensitivity; Vibration Category 2, Residential; and Vibration Category 3, Institutional. FTA defines these categories as follows:

- *Category 1:* Buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes.
- *Category 2:* All residential land uses and any buildings where people sleep, such as hotels and hospitals.
- *Category 3:* Institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

Under conditions where there is an infrequent number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 80 VdB for Category 2 buildings, and 83 VdB for Category 3 buildings.¹⁰ Under conditions where there is an occasional number of events per day, FTA has established thresholds of 65 VdB for Category 1 buildings, 75 VdB for Category 2 buildings, and 78 VdB for Category 3 buildings.¹¹ No thresholds have been adopted or recommended for commercial and office uses.

11.2.2 California Department of Public Health Noise Standards

The California Department of Public Health has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. **Table 11-5** shows these guidelines for land use and noise exposure compatibility. In addition, California Government Code Section 65302(f) requires each county and city in the state to prepare and adopt a comprehensive long-range general plan for its physical development. Section 65302(g) requires the general plan to include a noise element. The noise element must:

- Identify and appraise noise problems in the community;
- Recognize Office of Noise Control guidelines; and
- Analyze and quantify current and projected noise levels.

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the state pass-by standard is consistent with the federal limit of 80 dBA. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dBA at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

¹⁰ FTA defines “infrequent events” as fewer than 30 vibration events of the same kind per day.

¹¹ FTA defines “occasional events” as between 30 and 70 vibration events of the same source per day.

**TABLE 11-5
COMMUNITY NOISE EXPOSURE (DNL OR CNEL)**

Land Use	Normally Acceptable^a	Conditionally Acceptable^b	Normally Unacceptable^c	Clearly Unacceptable^d
Single-Family Homes, Duplexes, Mobile Homes	50–60	55–70	70–75	above 75
Multifamily Homes	50–65	60–70	70–75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging—Motels, Hotels	50–65	60–70	70–80	above 75
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 70
Sports Arenas, Outdoor Spectator Sports	—	50–75	—	above 75
Playgrounds, Neighborhood Parks	50–70	—	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	above 80
Office Buildings, Business and Professional, Commercial	50–70	67–77	above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	—

NOTES: CNEL = community noise equivalent level; DNL = day-night average noise level

- ^a *Normally Acceptable*: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
- ^b *Conditionally Acceptable*: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- ^c *Normally Unacceptable*: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- ^d *Clearly Unacceptable*: New construction or development should generally not be undertaken.

SOURCE: Governor's Office of Planning and Research, *State of California General Plan Guidelines – Noise Element Guidelines*, 2017.

11.2.3 California Building Code

The California Building Code requires that walls and floor/ceiling assemblies separating dwelling units from each other, or from public or service areas, have a sound transmission class¹² of 50 dB for all common interior walls and floor/ceiling assemblies between adjacent dwelling units, or between dwelling units and adjacent public areas for multifamily units and transient lodging. The code specifies a maximum interior performance standard of 45 dBA.

The State of California has also established noise insulation standards for new multifamily residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (California Code of Regulations, Title 24). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA CNEL.

¹² The sound transmission class is used as a measure of a material's ability to reduce sound. The sound transmission class is equal to the number of decibels a sound is reduced as it passes through a material.

Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

11.2.4 State Vibration Standards

No state vibration standards are applicable to the proposed project. Moreover, according to the California Department of Transportation's (Caltrans's) *Transportation and Construction Vibration Guidance Manual*, there are no official Caltrans standards for vibration.¹³ However, this manual provides guidelines for assessing the potential for vibration damage to various types of buildings, ranging from 0.08 to 0.12 in/sec PPV for extremely fragile historic buildings, ruins, and ancient monuments to 0.50 to 2.0 in/sec PPV for modern industrial/commercial buildings.

11.2.5 San Mateo County Airport Land Use Commission Comprehensive Land Use Plan

Portions of the amended DTPP area are located within the Airport Influence Area, as defined by the San Carlos Airport's Comprehensive Land Use Plan (CLUP),¹⁴ adopted by the San Mateo County Airport Land Use Commission in October 2015. The City of Redwood City is located within the Airport Influence Area (Area A) which includes areas around the Airport that are affected by noise, height, and safety considerations. The CLUP includes noise policies and standards for projects within Area A of the Airport, as summarized below. However, the 60, 65, 70, and 75 CNEL noise contours for San Carlos Airport do not extend into the City of Redwood City.

Airport Influence Area Policy 1 – Real Estate Disclosure Area

Within Area A of the AIA the real estate disclosure requirements of state law apply. Section 11010 (b) (13) of the Business and Professions Code requires people offering subdivided property for sale or lease to disclose the presence of all existing and planned airports within two miles of the property. The law requires that, if the property is within an "airport influence area" designated by an airport land use commission, 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.

¹³ California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2020.

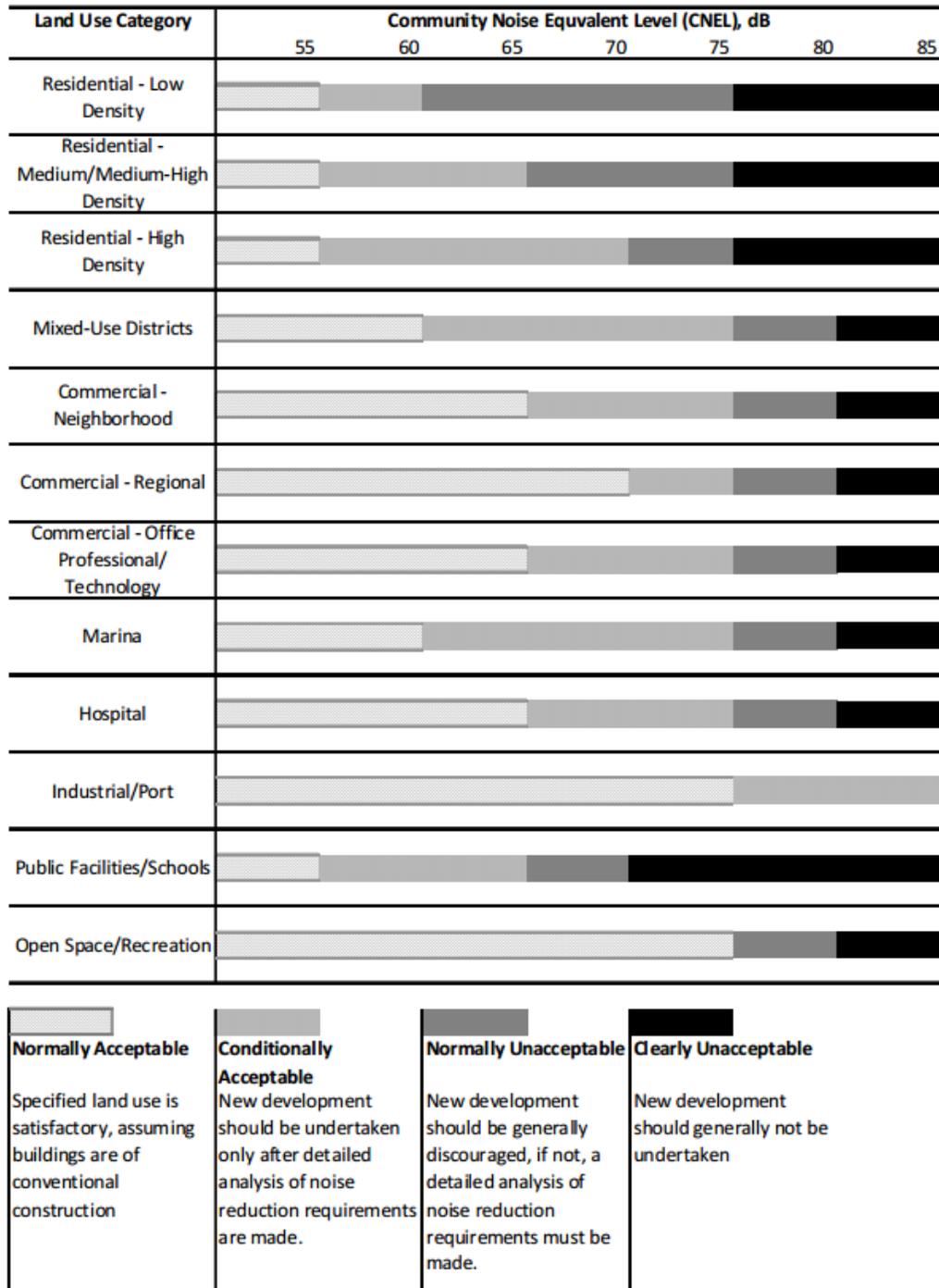
¹⁴ City/County Association of Governments of San Mateo County, *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*, adopted October 2015. Available at https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf. Accessed January 24, 2022.

11.2.6 Redwood City General Plan

Redwood City addresses issues of land use/noise compatibility, transportation noise, and community noise in the *Public Safety Element* of the Redwood City General Plan. The goals and policies in the General Plan *Noise Chapter* promote compatible development throughout the city and those listed below relate to the amended DTPP area. Policies pertaining to noise and adopted for the purpose of avoiding or mitigating an environmental effect are listed below. Policies listed below that are also considered land use policies are addressed in Section 4.9, *Land Use and Planning*, of this Draft SEIR.

- *Policy PS-13.3*: Consider noise impacts as part of the development review process, particularly the location of parking, ingress/egress/loading, and refuse collection areas relative to surrounding residential development and other noise-sensitive land uses.
- *Policy PS-13.4*: In accordance with the Municipal Code and noise standards contained in the General Plan, strive to provide a noise environment that is at an acceptable noise level near schools, hospitals, and other noise sensitive areas
- *Policy PS-13.5*: Limit the hours of operation at all noise generation sources that are adjacent to noise sensitive areas, wherever practical.
- *Policy PS-13.6*: Require all exterior noise sources (construction operations, air compressors, pumps, fans, and leaf blowers) to use available noise suppressions devices and techniques to bring exterior noise down to acceptable levels that are compatible with adjacent land uses.
- *Policy PS-13.8*: Implement appropriate standard construction noise controls for all construction projects.
- *Policy PS-13.9*: Require noise created by new non-transportation noise sources to be mitigated so as not to exceed acceptable interior and exterior noise level standards.
- *Policy PS-13.10*: Do not allow new residential or other noise sensitive land use development in noise impacted areas unless effective mitigation measures are incorporated into the project design to reduce outdoor activity area noise levels

The General Plan also sets standards identifying appropriate noise levels for various uses within the City. **Figure 11-3** presents the City's Noise Guidelines for Land Use Planning, as presented in the City's General Plan Public Safety Element. The guidelines indicate acceptable and unacceptable noise environments for a variety of land uses, establishing more restrictive acceptable noise environments for noise sensitive uses such as residential, and less restrictive standards for noise tolerant industrial/port land uses.



SOURCE: City of Redwood General Plan, *Public Safety Element*, Noise Chapter. 2010.

Figure 11-3
Redwood City Noise Guidelines for Land Use Planning

11.2.7 Redwood City Municipal Code

Chapter 24 (Noise Regulation) of the Redwood City Municipal Code sets allowable noise limits for different types of receiving land uses. The noise levels allowed by the Noise Ordinance depend primarily on the background noise level in the area. For the residential developments in the project vicinity, applicable noise limits are discussed in Chapter 24, Article II, Division 2 and 3. Section 24.21 prohibits noise increases of 6 dB above local ambient measured noise at any point within a residential district due to an assemblage of 3 or more people during the hours of 8:00 p.m. and 8:00 a.m. Section 24.31 of the Noise Ordinance prohibits noise levels from exceeding 110 dBA for any item of machinery, equipment, or device used during construction in a residential district. Section 24.32 of the Ordinance prohibits construction during the hours of 8:00 p.m. to 7:00 a.m. weekdays, and at any time on Saturdays, Sundays, and holidays, if the construction generates noise levels exceeding the local ambient noise level measured at any point within a residential district. The Building Official (or designee) may approve construction work occurring outside the specified hours.

Section 36.7.B (Outdoor Equipment) of the City Zoning Code requires that outdoor equipment such as air conditioning units or pool equipment must be located in the side or rear yard and setback a minimum of five (5) feet from the property line and that such equipment may not generate noise that exceeds 55 dBA at any point along the property line.

11.2.8 Conditions of Approval

As a result of the California Supreme Court's decision with respect to impacts of the environment on a project, these potential non-CEQA impacts are not further addressed in this SEIR. However, the City, based on project-specific noise studies that may be conducted as individual subsequent development projects are considered for approval, would continue to enforce certain noise-related mitigation measures from the DTPP Final EIR, with clarifying edits, as conditions of approval for these subsequent development projects, as project applications and noise conditions warrant. Such conditions, uniformly applied by the City to all applicable projects consistent with the Redwood City General Plan, Municipal Code, and Zoning Code, may include the following:

Condition of Approval 11a: Noise Reduction Measures for Multifamily Housing

The City shall require noise studies consistent with the requirements of the California Building Code to be conducted for proposed new multifamily residential projects within the amended DTPP area to identify noise reduction measures necessary to achieve compatibility with City Noise Element guidelines (55 dBA CNEL at sensitive exterior spaces) and Title 24 standards (45 dBA CNEL within residential units). Each noise study must be approved by the City's Building Inspection Division prior to issuance of a building permit. Identified noise reduction measures, in order of preference so that windows can be opened, may include:

Site and building design so as to minimize noise in shared residential outdoor activity areas by locating such areas behind the buildings, in courtyards, or orienting the terraces toward the interior of lots rather than streets;

Site and building design so as to minimize noise in the most intensively occupied and noise-sensitive interior spaces of units, such as bedrooms, by placing such interior spaced and their windows and other openings in locations with less noise exposure;

Windows and doors with a high Sound Transmission Class (STC) rating and noise-attenuating wall assemblies;

Forced air mechanical ventilation systems in all units exposed to noise level exceeding Title 24 standards to allow residents the option of reducing noise by keeping the windows closed.

Condition of Approval 11b: Groundborne Vibration Measures for Habitable Buildings

The City shall require a detailed site-specific vibration study prior to development of new habitable buildings within 100 feet of the Caltrain or California High Speed Rail right-of-way. The study shall demonstrate that groundborne vibrations associated with rail operations either would not exceed applicable FTA groundborne vibration impact criteria, or can be reduced to below the applicable FTA criteria thresholds through building design and construction measures (e.g. stiffened floors, modified foundations), which shall be required as conditions of permit approval.

11.3 Impacts and Mitigation Measures

11.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe noise and vibration impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

11.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or
- generate excessive groundborne vibration or groundborne noise levels; or
- for a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

As discussed above, while CEQA requires the analysis of potential adverse effects of a project on the environment, the California Supreme Court ruled in 2015 in *CBIA v. BAAQMD* that the potential effects of the environment on the project are legally not required to be analyzed or mitigated under CEQA. Except where the project's impacts would exacerbate the existing

conditions CEQA no longer requires that potential effects of the environment on the project be analyzed or mitigated.¹⁵

An operational noise impact was identified in the DTPP Final EIR with respect to impacts of the existing noise environment on proposed sensitive land use, specifically, the noise impacts associated with Caltrain operations. Mitigation Measure 11-1 was identified in the DTPP Final EIR to require noise studies for proposed new multifamily residential project within the amended DTPP area to identify noise reduction measures necessary to ensure achievement of the land use compatibility noise standards established in the *City Noise Element*.

An operational vibration impact was identified in the DTPP Final EIR with respect to impacts of the existing environment on proposed sensitive land use, specifically, the vibration impacts associated with Caltrain and future high speed rail operations. Mitigation Measure 11-2 was identified in the DTPP Final EIR to require a detailed, site-specific vibration study for new habitable buildings with 100 feet of the rail line.

11.3.3 Impacts and Mitigation Measures

Impact NO-1: Implementation of the DTPP Plan-Wide Amendments would not generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that construction-related noise generated by the DTPP could result in a *potentially significant impact* and identified conditions of approval on all future projects involving demolition and construction activities. Implementation of the DTPP Plan-Wide Amendments would not change this conclusion because, while this SEIR assumes a potential future extension of the northern DTPP boundary, the same types of construction activities would occur and distances to the nearest receptor locations would be similar and represent a similar level of potential impact as the original DTPP. Therefore, this SEIR assumes that there would be no substantial increase in duration of construction-related activity with the DTPP Plan-Wide Amendments.

Although the modifications under the DTPP Plan-Wide Amendments would allow for certain exceptions to massing controls on some parcels in the amended DTPP area, these modifications would occur within the same general building envelopes as assumed in the Final EIR and, hence would not extend the noise contour generated by construction activities. This would include utility improvements that would likely be required (e.g., installation of recycled water pipelines and potential upgrades, for at least certain projects, of potable water, wastewater, and/or storm drain pipes). This is because, while such off-site improvements would potentially expand the geographical scope of noise impacts, utility construction is typically relatively short in duration (i.e., a few weeks or, at most, two or three months) in any given location. Moreover, the scale of utility improvements is generally far less than that of multi-story building construction. Accordingly, any required utility improvements would represent a relatively small proportion of

¹⁵ *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.

any development project's construction noise, particularly as it would affect any individual receptor.

Consequently, DTPP Final EIR Mitigation Measure NO-1 is sufficient to address temporary construction noise impacts on receptors surrounding the amended DTPP area by restricting the hours of construction consistent with Chapter 24.32 of the City's municipal code and requiring noise controls measures consistent with Policies PS 13-6 and PS 13-8 of the City's General Plan.

While some activities, like large concrete pours that require extended periods of continuous activity or complex utility relocation efforts, could require continuous work beyond the permitted hours, any work outside of the City's construction hours would be temporary and would require special permits that would assure compliance with applicable noise reduction requirements. The Redwood City Municipal Code allows for work on weekends/holidays on an as-needed basis.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Mitigation Measure NO-1 (formerly Mitigation Measure 11-4 from the DTPP Final EIR, incorporated without revisions) is applicable to the DTPP Plan-Wide Amendments and sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure NO-1: Construction Noise Reduction (formerly Mitigation Measure 11-4 from the DTPP Final EIR): Reduce demolition and construction noise impacts on adjacent uses by imposing conditions of approval on all future projects involving demolition and construction activities, including required utility improvements, which conditions shall require the Project Applicant to undertake the following conventional construction-period noise abatement measures:

- *Construction Plan.* Prepare a detailed construction plan identifying the schedule for major noise-generating construction activities. The construction plan shall identify a procedure for coordination with nearby noise-sensitive facilities so that construction activities and the event schedule can be scheduled to minimize noise disturbance. This plan shall be provided to all noise-sensitive land uses within 500 feet of the construction site.
- *Construction Scheduling.* Ensure that noise-generating construction activity is limited to between the hours of 7:00 a.m. to 8:00 p.m., Monday through Friday, except when authorized by the Building Official (Redwood City Municipal Code Section 24.32). (*Redwood City Municipal Code Section 24.30*)
- *Construction Equipment Mufflers and Maintenance.* Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment
- *Equipment Locations.* Locate stationary noise-generating equipment required on construction project sites as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project site.
- *Construction Traffic.* Route all construction traffic to and from the construction sites via designated truck routes to the maximum extent feasible. Prohibit construction-related heavy truck traffic in residential areas where feasible.

- *Quiet Equipment Selection.* Use quiet construction equipment, particularly air compressors, wherever feasible.
- *Temporary Barriers.* Construct solid plywood fences around construction sites adjacent to residences, operational businesses, or noise-sensitive land uses.
- *Temporary Noise Blankets.* Temporary noise control blanket barriers shall be erected along building facades of construction sites to attenuate noise from elevated activities if noise conflicts cannot be resolved by scheduling. (Noise control blanket barriers can be rented and quickly erected.)
- *Noise Disturbance Coordinator.* For projects that would last over one year in duration, the City may choose to require the Project Applicant to 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 complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures to correct the problem. The Project Applicant shall post, in a conspicuous location, a telephone number for the Disturbance Coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. (The Noise Disturbance Coordinator shall work directly with an assigned City staff member.)

Significance after Mitigation: Less than Significant. (No new significant impact, compared to DTPP Final EIR)

Impact NO-2: Implementation of the DTPP Plan-Wide Amendments would not generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that operational noise generated stationary sources associated with commercial uses including offices, retail stores, restaurants, or cafes proposed next to or below residential development could generate noise that could result in adverse changes to the noise environment. In addition, new residential development could generate noise that may adversely affect existing or proposed noise-sensitive uses (e.g., residential development noise sources such as mechanical equipment associated with new multifamily residential structures). However, no mitigation measures were identified in the DTPP Final EIR addressing this potential impact.

The DTPP Final EIR found that operational noise increased by traffic generated by development under the DTPP would be a less than significant impact and no mitigation measures were required.

Operational Stationary Source Noise Impacts

Implementation of the DTPP Plan-Wide Amendments is assumed in this SEIR to indirectly result in increased office and residential development in the DTPP area, as well as potentially include R&D Laboratory uses.

New commercial development proposed next to or below residential development, along with new active, recreational rooftop uses, could generate noise that could result in adverse changes to the noise environment. Commercial development can include a variety of stationary noise-generating sources on the exterior of buildings such as heating, ventilation and air conditioning (HVAC) equipment (such as chillers/cooling towers with compressors and condenser fans), and emergency generators. Under the proposed DTPP Plan-Wide Amendments, R&D Laboratory uses may also potentially be developed, which can have a greater demand for and use of mechanical equipment compared to office development. Residential development such as multifamily residential structures can also include mechanical equipment that can generate noise that may adversely affect existing or proposed noise-sensitive uses.

Policy PS-13.3 of the City's General Plan requires that consideration of potential noise impacts be performed as part of the development review process, particularly the location of parking, ingress/egress/loading, and refuse collection areas relative to surrounding residential development and other noise-sensitive land uses. Policy PS-13.6 of the City's General Plan requires all exterior noise sources such as air compressors, pumps, fans, and leaf blowers to use available noise suppressions devices and techniques to bring exterior noise down to acceptable levels that are compatible with adjacent land uses. Additionally, Policy PS-13.9 of the City's General Plan requires that noise created by new non-transportation noise sources be mitigated so as not to exceed acceptable interior and exterior noise level standards.

Section 36.7.B (Outdoor Equipment) of the City Zoning Code requires that outdoor equipment such as air conditioning units or pool equipment must be located in the side or rear yard and setback a minimum of five (5) feet from the property line and that such equipment may not generate noise that exceeds 55 dBA at any point along the property line.

With respect to noise from public gatherings in the amended DTPP area, the DTPP provides for notifications to advise property owners, tenants and users of property within the amended DTPP Area of the inherent impacts and inconveniences associated with purchase, tenancy or use of property in the amended DTPP area for the potential for noise to occur from restaurants, business operations and special events. The DTPP further states that such noise sources are not to be considered a nuisance within the amended DTPP area.

While the General Plan policies, outdoor equipment provision of the City Zoning Code, and the DTPP's provisions regarding noise from public gatherings would address potential impacts from these sources, they would not address potential impacts associated with noise from mechanical equipment. Because the specific, type size, and locations of mechanical equipment within the potential development sites within the amended DTPP area are unknown, a new mitigation measure is identified below to address potential noise conflicts that may be associated with mechanical equipment. The DTPP Plan-Wide Amendments would result in more severe impacts than those previously identified in the DTPP Final EIR for stationary source noise. However, implementation of new Mitigation Measure NO-2 would provide a performance standard consistent with the restrictions of the General Plan Noise Element as well as Section 36.7.B (Outdoor Equipment) of the City Zoning Code. With implementation of new Mitigation Measure NO-2, the impact of the DTPP Plan-Wide Amendments with respect to generation of a substantial

permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance would be *less than significant*.

Mitigation Measure NO-2: Operational Noise Performance Standard. Prior to the issuance of any building permit, future project applicants within the amended DTPP area shall ensure that all mechanical equipment is selected and designed to reduce impacts on surrounding uses by meeting the performance standards of Chapters 36.7.B of the Redwood City Zoning Code, limiting noise from stationary sources such as mechanical equipment to 55 dBA at the property lines. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance has been verified by the City. Methods of achieving these standards include, but are not limited to, using low-noise-emitting HVAC equipment, locating HVAC and other mechanical equipment within a rooftop mechanical penthouse, and using shields and parapets to reduce noise levels to adjacent land uses.

Project applicants shall submit an acoustical study prepared by a qualified acoustical engineer during final building design that evaluates the potential noise generated by building mechanical equipment and to identify the necessary design measures to be incorporated to meet the City's standards. The study shall be submitted to the Community Development and Transportation Department for review and approval before the issuance of any building permit.

Significance after Mitigation: Less than Significant. (New significant but mitigable impact, compared to DTPP Final EIR)

Noise reduction measures implemented as directed in an acoustical study would reduce operational noise to a less-than-significant level. For example, for emergency generators, industrial-grade silencers can reduce exhaust noise by 12 to 18 dBA, and residential-grade silencers can reduce such noise by 18 to 25 dBA.¹⁶ Acoustical screening can also be applied to exterior noise sources can achieve up to 15 dBA of noise reduction.¹⁷

Operational Traffic Noise Impacts

In addition to increases in office space and residential development from the DTPP Plan-Wide Amendments discussed above, implementation of the proposed amendments to the DTPP would also result in certain alterations to vehicular circulation within the amended DTPP area.

Specifically, the following roadways would be closed:

- One-block segment of Hamilton Street between Broadway and Marshall Street
- Half-block segment of Broadway between Redwood Creek and Main Street
- One-block segment of Spring Street between Main and Walnut Streets

In addition, the following streets would be modified:

- California Street between Winklebleck Street and James Avenue would be abandoned
- Franklin Street between Winklebleck Street and James Avenue would be extended

¹⁶ American Society of Heating, Refrigeration, and Air Conditioning Engineers, Technical Committee on Sound and Vibration, *Generator Noise Control—An Overview*, 2006.

¹⁷ Environmental Noise Control, Product Specification Sheet, ENC STC-32 Sound Control Panel System, 2014.

The proposed street closures and modifications (besides the Franklin Street extension and the Spring Street closure) were not included in the DTPP, but would generally be consistent with the circulation network that was included in the DTPP, because they promote a vibrant, mixed-use downtown that prioritizes mobility by active modes like walking and riding bikes. In addition, the revised street grid just north of James Avenue would allow for implementation of the DTPP’s proposed Franklin Street extension between James Avenue and Winklebleck Street.

Guidance on the significance of transportation-related changes to ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels caused by aircraft operations.¹⁸ The recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, they apply to all sources of transportation noise described in terms of cumulative noise exposure metrics such as the DNL.

Table 11-6 presents criteria based on the FICON findings, which show that as ambient noise levels increase, a smaller increase in decibel levels is sufficient to cause significant annoyance. In other words, the quieter the ambient noise level, the more the noise can increase (in decibels) before it causes significant annoyance. The 5 dBA and 3 dBA noise level increases listed in Table 11-6 also correlate directly with noise level increases that Caltrans considers to represent “readily perceivable” and “barely perceivable,” respectively, for short-term noise increases. Thus, the significance of permanent increases in transportation noise levels is evaluated based on the increases identified in Table 11-6.

**TABLE 11-6
MEASURES OF A SUBSTANTIAL INCREASE IN TRANSPORTATION NOISE EXPOSURE**

Ambient Noise Level without Project (DNL)	Significant Impact Assumed to Occur if Project Site Development Increases Ambient Noise Levels by:
<60 dB	+ 5.0 dB or more
60–65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more ^a

NOTES: DB = DECIBELS; DNL = DAY-NIGHT AVERAGE NOISE LEVEL

^a According to the Federal Interagency Committee on Noise report, the 1.5 A-weighted decibel (dBA) increase in environments that exceed 65 dBA is not necessarily a significant increase but, rather, an increase warranting further investigation.

SOURCE: Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

Potential vehicular traffic noise increases from existing (2021) conditions plus implementation of the DTPP Plan-Wide Amendments were evaluated and compared to the existing traffic noise levels. Noise levels along 20 street segments within and surrounding the amended DTPP area boundaries analyzed in the transportation analysis were quantitatively modeled and the modeling results are presented in **Table 11-7**. Roadway segment link volumes at these study locations were developed for the existing plus amended DTPP area and 2040 cumulative conditions. The

¹⁸ Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

roadways segments were selected as they represent roadways expected to be most likely used to access the amended DTPP area and therefore be affected by vehicle traffic changes.

**TABLE 11-7
TRAFFIC NOISE INCREASES ALONG ROADWAYS IN THE PLAN VICINITY**

Roadway Segment	Existing Conditions	Existing plus DTPP Amendments Implementation	Change in Noise Level	Significant?
Weekday Peak-Hour Noise Levels				
Maple St from El Camino Real to Main St	49.1	49.0	-0.1	No
James Ave from Clinton St to El Camino Real	60.8	60.7	-0.1	No
Jefferson Ave from Clinton St to El Camino Real	63.6	63.7	0.1	No
Jefferson Ave from El Camino Real to Sequoia Station	69.7	69.9	0.2	No
Broadway from El Camino Real to Perry St	59.8	60.6	0.8	No
Broadway from Perry St to Arguello St	61.9	64.8	2.9	No
Broadway from Arguello St to Winslow St	60.3	60.9	0.6	No
Broadway from Winslow St to Jefferson Ave	53.9	53.3	-0.6	No
Broadway from Jefferson Ave to Main St	63.3	62.5	-0.2	No
Broadway from Main St to Spring St	61.3	61.2	-0.1	No
Marshall St from Arguello St to Winslow St	48.3	50.8	2.5	No
Brewster Ave from Fulton St to Broadway	54.2	54.3	0.1	No
Brewster Ave from Broadway to El Camino Real	49.2	49.5	0.3	No
Middlefield Road from Jefferson Ave to Main St	59.8	60.4	0.6	No
Middlefield Road from Main St to Maple St	63.0	64.2	1.2	No
Middlefield Road from Beech St to Chestnut St	60.2	61.2	1.0	No
Veterans Boulevard from Brewster Ave to Jefferson Ave	67.2	67.4	0.2	No
Veterans Boulevard from Jefferson Ave to Main St	62.2	62.9	0.7	No
Veterans Boulevard from Main St to Maple St	61.8	62.9	1.1	No
Winslow St from Marshall St to Brewster Ave	51.4	52.8	1.4	No

NOTE: dBA = A-weighted decibels

SOURCES: Traffic data compiled by Fehr & Peers in 2022, and noise modeling performed by Environmental Science Associates in 2022.

As shown in Table 11-7, project-generated vehicular traffic would increase traffic noise along the 20 modeled segments up to 2.9 dBA, while some segments would experience a decrease in noise from traffic being redistributed because of new roadway connections. As described in the methodology section, this analysis considers any increase in traffic noise of greater than 3 dBA or 5 dBA, depending on the existing noise level, to result in a significant noise impact. As shown in Table 11-7, all traffic-noise increases resulting from implementation of the DTPP Plan-Wide Amendments would be below 3 dBA, which is also the level considered barely perceptible in laboratory environments. Therefore, traffic noise generated by subsequent projects under the DTPP Plan-Wide Amendments would not result in a substantial permanent increase in ambient noise levels. Operational traffic noise impacts resulting from the DTPP Plan-Wide Amendments would not result in new or more severe impacts than those identified in the DTPP Final EIR. Therefore, this impact would be *less than significant* and no mitigation is required.

Impact NO-3: Implementation of the DTPP Plan-Wide Amendments would not generate excessive groundborne vibration or groundborne noise levels. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that construction-related vibration generated from construction under the DTPP could result in a *potentially significant impact* and then identified conditions of approval on all future projects involving demolition and construction activities. While this SEIR assumes a potential future geographical extension of the northern DTPP boundary, the same types of construction activities would occur and distances to the nearest receptor location would be similar and represent a similar level of potential impact as the original DTPP. This would include utility improvements that would likely be required (e.g., installation of recycled water pipelines and potential upgrades, for at least certain projects, of potable water, wastewater, and/or storm drain pipes). This is because, while such off-site improvements would potentially expand the geographical scope of vibration impacts, utility construction is typically relatively short in duration (i.e., a few weeks or, at most, two or three months) in any given location. Moreover, the scale of utility improvements is generally far less than that of multi-story building construction. Accordingly, any required utility improvements would represent a relatively small proportion of any development project's construction vibration, particularly as it would affect any individual receptor. Therefore, this SEIR assumes that there would be no substantial increase in duration of construction-related activity with approval of the DTPP Plan-Wide Amendments and therefore, there would be no substantial increase in vibrations-generating activities (e.g., demolition, pile driving) with approval of the proposed Amendments. The proposed DTPP Plan-Wide Amendments do not propose any changes in allowable maximum building heights.¹⁹ DTPP Final EIR Mitigation Measure 11-3 is sufficient to address construction-related vibration impacts on receptors surrounding the proposed amended DTPP area, and has been included here as Mitigation Measure NO-3.

¹⁹ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts than those identified in the DTPP Final EIR. Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR) is applicable to the amended DTPP area and is sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure NO-3: Vibration Reduction (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments): The City shall reduce ground-borne vibration levels that may be generated by future site-specific demolition and construction activities, including required utility improvements, by imposing conditions of approval on all future projects involving demolition and construction activities, which conditions shall require the Project Applicant to ensure the following ground-borne vibration abatement measures are implemented by the construction contractor:

- Restrict vibration-generating activity to between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, except when authorized by the Building Official (Redwood City Municipal Code Section 24.32).
- Notify occupants of land uses located within 200 feet of pile-driving activities of the project construction schedule in writing.
- Investigate in consultation with City staff possible pre-drilling of pile holes as a means of minimizing the number of percussions required to seat the pile.
- Conduct a pre-construction site survey documenting the condition of any historic structure located within 200 feet of pile driving activities.
- Monitor pile driving vibration levels to ensure vibration does not exceed appropriate thresholds for the building (5 mm/sec (0.20 inches/sec) ppv for structurally sound buildings and 2 mm/sec (0.08 inches/sec) ppv for historic buildings.

Significance after Mitigation: Less than Significant. (No new significant impact, compared to DTPP Final EIR)

Impact NO-4: Implementation of the DTPP Plan-Wide Amendments would not expose people residing or working in the project area to excessive noise levels due to its location within the vicinity of a private airstrip, or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. (*Less than Significant*)

The DTPP Final EIR found that development under the DTPP would require disclosure of proximity to the airport as part of all real estate sales or leases and referral of the DTPP to the City/County Council of Governments of San Mateo County and the Airport Land Use Commission for a determination of consistency with the San Mateo County Comprehensive Airport Land Use Compatibility Plan (ALUCP), as amended for San Carlos Airport. The DTPP Final EIR found that because the amended DTPP area is outside the projected 55 dB CNEL contour published in the Redwood City General Plan and the ALUCP, the potential impact related to airport noise would be *less than significant*.

The amended DTPP area is located approximately 1.4 miles from the San Carlos Airport. The amended DTPP area is located within Area A of the Airport Influence Area, as defined by the San Carlos Airport’s ALUCP, adopted by the San Mateo County Airport Land Use Commission in October 2015.²⁰ Northern portions of the DTPP area are located within Area B of the Airport Influence Area. The ALUCP includes a single noise policy for projects within Area A of the Airport. However, the 60, 65, 70, and 75 CNEL noise contours for San Carlos Airport do not extend into the City of Redwood City. Consequently, because noise from aircraft operations at the San Carlos Airport do not exceed 60 CNEL (a level “normally acceptable” per Table 11-7 above) anywhere in the proposed amended DTPP area and because the ALUCP requires a Real Estate Disclosure as part of Policy 1 of the Airport Influence Area, the DTPP Plan-Wide Amendments would not result in new or more severe impacts with respect to airport noise than what was identified in the DTPP Final EIR. Therefore, impacts with respect to exposure of people residing or working in the project area to excessive noise levels due to its location within the vicinity of a private airstrip, or an airport land use plan would be *less than significant*.

11.4 References

- American Society of Heating, Refrigeration, and Air Conditioning Engineers, Technical Committee on Sound and Vibration, *Generator Noise Control—An Overview*, 2006.
- California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369.
- California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.
- California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, September 2020.
- City/County Association of Governments of San Mateo County, *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*, adopted October 2015. Available at https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf. Accessed January 24, 2022.
- Environmental Noise Control, Product Specification Sheet, ENC STC-32 Sound Control Panel System, 2014.
- Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

²⁰ City/County Association of Governments of San Mateo County, *Final Comprehensive Airport Land Use Compatibility Plan for the Environs of San Carlos Airport*, adopted October 2015. Available at https://ccag.ca.gov/wp-content/uploads/2015/11/SQL_FinalALUCP_Oct15_read.pdf. Accessed January 24, 2022.

This page intentionally left blank

CHAPTER 12

Air Quality

This SEIR chapter analyzes the effects of the changes to air quality that would result from implementation of the proposed DTPP Plan-Wide Amendments, focusing on changes to the DTPP EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Air quality impacts of the DTPP project were analyzed on pp. 12-6 to 12-21 of the DTPP Final EIR. The DTPP Final EIR included a discussion of impacts with respect to criteria air pollutant and ozone precursor emissions, localized carbon monoxide (CO) concentrations, community health risk and hazards, and odorous emissions. The EIR determined that the DTPP would be consistent with the Bay Area 2005 Ozone Strategy, the applicable Bay Area Air Quality Management District (BAAQMD) Clean Air Plan at the time and would therefore have a less than significant impact with respect to regional criteria air pollutant and ozone precursor emissions. In addition, the DTPP Final EIR concluded that since traffic volumes at affected intersections would not increase to more than 44,000 vehicles per hour, the impact on localized CO levels would be less than significant.

Impact 12-1 of the DTPP Final EIR identified a potentially significant construction and operational impacts from exposure to Toxic Air Contaminants (TACs) and fine particulate matter (PM_{2.5}). In addition, the DTPP Final EIR identified a potentially significant impact with respect to odors as development facilitated by the DTPP could result in food service uses in the vicinity of residential or other odor-sensitive uses. In order to mitigate these impacts to a less than significant level, the DTPP Final EIR identified Mitigation Measure 12-1 (protection of new sensitive receptors) and Mitigation Measure 12-2 (odor reduction). With the implementation of these mitigation measures, the DTPP Final EIR found that the impacts of the DTPP on health risk and odorous impacts would be reduced to a less-than-significant level.

12.1 Environmental Setting

12.1.1 Climate and Meteorology

The amended DTPP area is located in the San Francisco Bay Area Air Basin (SFBAAB or “air basin”).¹ Air quality is influenced by natural factors such as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. Climate and meteorological conditions that affect the accumulation or movement and dispersal of air pollutants within the SFBAAB are the same as described in the DTPP Final EIR. The following setting information updates the existing air quality baseline.

12.1.2 Criteria Air Pollutants

As required by the 1970 Federal Clean Air Act, the United States Environmental Protection Agency (U. S. EPA) initially identified six air pollutants that are pervasive in urban environments for which state and federal health-based ambient air quality standards were established. The U.S. EPA calls these pollutants “criteria air pollutants,” and the agency has regulated them by developing specific public health-based and welfare-based criteria as the basis for setting permissible levels. Ozone, CO, particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead are the six criteria air pollutants originally identified by the U.S. EPA. Later, subsets of PM were identified and permissible levels were established. These include PM₁₀, the fraction of PM 10 microns in diameter or less and PM of 2.5 microns in diameter or less (PM_{2.5}).

Table 12-1 briefly summarizes the sources and the most common health and environmental effects for each of the air pollutants for which there is a national and/or California ambient air quality standard (ambient air quality standards are discussed later under the Regulatory Setting).

Although the federal Clean Air Act established the NAAQS, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological challenges in California, there are differences between the state and national ambient air quality standards, as shown in Table 12-1. California ambient standards tend to be at least as protective as national ambient standards or are often more stringent. In addition to the six criteria air pollutants, California has adopted ambient air quality standards for sulfates, hydrogen sulfide, visibility reducing particles, and vinyl chloride.

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

**TABLE 12-1
SOURCES, ENVIRONMENTAL AND HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS**

Criteria Air Pollutant	Sources	Environmental & Health Effects
Ozone	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.	<ul style="list-style-type: none"> • 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, paint and metals
Carbon Monoxide	Internal combustion engines, primarily gasoline-powered motor vehicles.	<ul style="list-style-type: none"> • Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Nitrogen Dioxide	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.	<ul style="list-style-type: none"> • Lung irritation • Enhanced allergic responses
Sulfur Dioxide	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.	<ul style="list-style-type: none"> • Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits
Particulate Matter (PM ₁₀)	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).	<ul style="list-style-type: none"> • Premature death & hospitalization, primarily for worsening of respiratory disease • Reduced visibility and material soiling
Particulate Matter (PM _{2.5})	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.	<ul style="list-style-type: none"> • Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits • Increased symptoms, increased inhaler usage
Lead	Present sources: lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.	<ul style="list-style-type: none"> • Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage
Sulfates	Produced by the reaction in the air of SO ₂ .	<ul style="list-style-type: none"> • Same as PM_{2.5}, particularly worsening of asthma and other lung diseases • Reduces visibility
Hydrogen Sulfide	Geothermal power plants, petroleum production and refining	<ul style="list-style-type: none"> • Nuisance odor (rotten egg smell) • At high concentrations: headache & breathing difficulties
Visibility Reducing Particles	See PM _{2.5}	<ul style="list-style-type: none"> • Reduced airport safety, scenic enjoyment, road safety, and discourages tourism
Vinyl Chloride	Polyvinyl chloride and vinyl manufacturing.	<ul style="list-style-type: none"> • Central nervous system effects, such as dizziness, drowsiness & headaches • Long-term exposure: liver damage & liver cancer

SOURCES: CARB, 2022. Common Air Pollutants. Available online: <https://ww2.arb.ca.gov/resources/common-air-pollutants>, accessed February 2, 2022.
 CARB, 2022. Sources of Air Pollution. Available online: <https://ww2.arb.ca.gov/resources/sources-air-pollution>, accessed February 2, 2022.

12.1.3 Ambient Air Quality Standards

As discussed in the DTPP Final EIR, National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for criteria air pollutants have been set at levels considered safe to protect public health and welfare, and protect the environment.

Table 12-2 summarizes the current NAAQS and CAAQS for each of the criteria air pollutants and updates Table 12.1 of the DTPP Final EIR.

12.1.4 Ambient Air Quality

The BAAQMD has jurisdiction to regulate air quality within the nine-county SFBAAB. Accordingly, the region's air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the SFBAAB. **Table 12-3** presents a five-year- summary for 2016 to 2020 of the highest annual criteria air pollutant concentrations, recorded at the air quality monitoring station closest to the amended DTPP area, operated and maintained by the BAAQMD at 897 Barron Avenue, approximately 7 miles southeast of the amended DTPP area. It also compares these concentrations with the most stringent applicable ambient air quality standards (whether state or federal). Concentrations shown in bold indicate only a localized exceedance of that standard. As attainment with air quality standards is determined on a basin-wide basis, it is possible for the basin to be in attainment with state or federal standards for a given pollutant notwithstanding an exceedance for a given pollutant standard at a local monitoring station. CO is not included in this table as CO concentrations have been well below the standards throughout the Bay Area since the SFBAAB was designated as attainment with respect to the CO standards in 1998. Lead and SO₂ are not included in this table because ambient lead concentrations are only monitored on an as-warranted basis, and the SFBAAB has never been designated as non-attainment for SO₂. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. The only lead monitoring station in the Bay Area is located at Reid-Hillview Airport in San Jose.² General aviation airports can be sources of lead because piston engine aircraft continue to use leaded fuel.

Compliance with the standards is on a regional basis. In the air basin, compliance is demonstrated by ongoing measurements of pollutant concentrations at more than 30 air quality monitoring stations operated by the BAAQMD in all nine bay area counties. An exceedance of an ambient air quality standard at any one of the stations counts as a regional exceedance.

As shown in Table 12-3, the most stringent applicable standards for ozone (the state one-hour standard of 0.09 ppm and the federal eight-hour standard of 0.07 ppm) were exceeded in Redwood City by three and five days, respectively, between 2017 and 2020. Table 12-3 also shows that the state 24-hour PM₁₀ standard of 35 micrograms per cubic meter (µg/m³) was exceeded on 28 days between 2017 and 2020. The state annual average standard was not exceeded between 2016 and 2020. The Redwood City station does not monitor PM₁₀, but ambient levels of NO₂ were not exceeded.

² BAAQMD, 2021. *2020 Air Monitoring Network Plan*, July 1, 2021. Available online: <https://www.baaqmd.gov/~media/files/technical-services/2020-network-plan-draft-202100526-pdf.pdf?la=en>, accessed February 2, 2022.

**TABLE 12-2
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	State Standards (CAAQS) ^a	Federal Standards (NAAQS) ^b
Ozone	1 hour	0.09 ppm	NA
	8 hours	0.070 ppm	0.070 ppm ^c
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm
	8 hours	9.0 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm
	Annual	0.03 ppm	0.053 ppm
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	0.075 ppm
	24 hours	0.04 ppm	0.14 ppm
	Annual	NA	0.03 ppm
Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	150 µg/m ³
	Annual ^d	20 µg/m ³	NA
Fine Particulate Matter (PM _{2.5})	24 hours	NA	35 µg/m ³
	Annual	12 µg/m ³	12 µg/m ³
Lead	30 days	1.5 µg/m ³	NA
	Calendar quarter	NA	1.5 µg/m ³
	Rolling 3-month average	NA	0.15 µg/m ³
Sulfates	24 hours	25 µg/m ³	NA
Hydrogen Sulfide	1 hour	0.03 ppm	NA
Visibility reducing particles	8 hours	-- ^e	NA
Vinyl Chloride	24 hours	0.01 ppm (26 µg/m ³)	NA

NOTES:

A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter

- ^a CAAQS = California ambient air quality standards. CAAQS for ozone, CO (except Lake Tahoe), SO₂ (one-hour and 24-hour), NO₂, particulate matter, and visibility reducing particles are values that are not to be exceeded. All other State standards shown are values not to be equaled or exceeded.
- ^b NAAQS = national ambient air quality standards. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The eight-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM₁₀ standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM_{2.5} standard is attained when the three-year average of the 98th percentile is less than the standard.
- ^c 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. EPA 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.
- ^d State standard = annual geometric mean; national standard = annual arithmetic mean.
- ^e Statewide visibility reducing particle 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.

SOURCE: BAAQMD, 2017. *Air Quality Standards and Attainment Status*, last updated January 5, 2017. Available online: <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>, accessed February 2, 2022.

**TABLE 12-3
SUMMARY OF AMBIENT AIR QUALITY DATA AT THE REDWOOD CITY STATION**

Pollutant	Standard	Monitoring Data by Year ^a				
		2016	2017	2018	2019	2020
Ozone						
Maximum 1-Hour Concentration (ppm)	>0.090 ppm ^b	0.075	0.115	0.067	0.083	0.098
Days 1-Hour Standard Exceeded		0	2	0	0	1
Maximum 8-Hour Concentration (ppm)	0.070 ppm ^c	0.061	0.087	0.050	0.077	0.078
Days 8-Hour Standard Exceeded		0	2	0	2	1
Fine Particulate Matter (PM_{2.5})						
Maximum 24-Hour Concentration (µg/m ³)	>35 µg/m ³ ^c	19.5	60.8	120.9	29.5	124.1
Annual Average (µg/m ³)	>12 µg/m ³ ^{b,c}	-	9.1	10.6	7.0	9.8
Days 24-Hour Standard Exceeded		0	6	13	0	9
Nitrogen Dioxide (NO₂)						
Maximum 1-Hour Concentration (ppb)	>100 ppb ^c	45.7	67.4	77.3	54.9	45.9
Days 1-Hour Standard Exceeded		0	0	0	0	0

NOTES: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter

^a “—” indicates that data are not available.

^b State standard, not to be exceeded; also a federal standard, not to be exceeded more than one per year.

^c Federal standard, not to be exceeded.

SOURCE: CARB, 2022. iADAM Air Quality Data Statistics – Top 4 Summary. Available online: <https://www.arb.ca.gov/adam/topfour/topfour1.php>, accessed February 2, 2022.

Air Quality Index

The U.S. EPA developed the Air Quality Index (AQI) scale to make the public health impacts of air pollution concentrations easily understandable. The index, much like an air quality “thermometer,” translates daily air pollution concentrations into a number on a scale between 0 and 500. The numbers in the scale are divided into six color-coded ranges, with numbers 0 through 500 as outlined below:

- **Green (0–50)** indicates “good” air quality. No health impacts are expected when air quality is in the green range.
- **Yellow (51–100)** indicates air quality is “moderate.” Unusually sensitive people should consider limiting prolonged outdoor exertion.
- **Orange (101–150)** indicates air quality is “unhealthy for sensitive groups.” Active children and adults, and people with respiratory disease, such as asthma, should limit outdoor exertion.
- **Red (151–200)** indicates air quality is “unhealthy.” Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
- **Purple (201–300)** indicates air quality is “very unhealthy.” Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit outdoor exertion.
- **Maroon (301–500)** indicates air quality is “hazardous.” This would trigger health warnings of emergency conditions, and the entire population is more likely to be affected.

The AQI numbers refer to specific amounts of pollution in the air. They are based on the federal air quality standards for ozone, CO, NO₂, SO₂, PM₁₀, and PM_{2.5}. In most cases, the federal standard for these air pollutants corresponds to the number 100 on the index chart. Thus, if the concentration of any of these pollutants rises above its respective standard, the air quality can be unhealthy for the public. In determining the air quality forecast, local air districts use the anticipated concentration measurements for each of the major pollutants, convert them into index numbers, and determine the highest index for each zone in a district. A Spare the Air Alert is called for the Bay Area when air quality is expected to be unhealthy in any of the region's five reporting zones.

Readings below 100 on the AQI scale would not typically affect the health of the general public (although readings in the moderate range of 50 to 100 may affect unusually sensitive people). Levels above 300 rarely occur in the United States, and readings above 200 have not occurred in the Bay Area in decades, with the exception of the October 2017 and November 2018 wildfires north of San Francisco and the August/September 2020 complex wildfires that occurred throughout the Bay Area. As a result, the AQI in several neighboring counties reached the “very unhealthy” and “hazardous” designations, ranging from values of 201 to above 350. During those periods, the BAAQMD issued “Spare the Air” alerts and recommended that individuals stay inside with windows closed and refrain from significant outdoor activity. Wildfires appear to be occurring with increasing frequency in California and the Bay Area as a result of global warming and climate change. Eighteen of the state's 20 largest wildfires and most destructive fires on record have occurred since the year 2000.³

AQI statistics over recent years indicate that air quality in the South Central Bay which includes Redwood City is predominantly in the “Good” or “Moderate” categories and healthy on most days for most people. Historical BAAQMD data indicate that the SFBAAB experienced air quality in the red level (unhealthy) on 34 days between 2017 and 2021. As shown in **Table 12-4**, the air basin had a total of 110 red-level or orange-level (unhealthy or unhealthy for sensitive groups) days between 2017 and 2021. A number of these days are attributable to the increasing frequency of wildfires. This table also shows that the SFBAAB experienced a total of 9 purple level (very unhealthy) days in between 2017 and 2021.

TABLE 12-4
AIR QUALITY INDEX STATISTICS FOR THE SFBAAB

AQI Statistics	Number of Days per Year				
	2017	2018	2019	2020	2021
Unhealthy for Sensitive Groups (Orange) AQI: 151-200	9	8	10	34	3
Unhealthy (Red) AQI: 201-300	9	8	0	17	0
Very Unhealthy (Purple) AQI: 301-500	3	5	0	1	0

SOURCE: BAAQMD, 2022. Monthly Air Quality Index for South Central Bay. Available online: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/aqi-highs?date=2021-12-02&view=monthly>, accessed February 21, 2022.

³ CALFIRE, 2022. Stats and Events. Available online: <https://www.fire.ca.gov/stats-events/>, accessed February 3, 2022.

12.1.5 TACs and Local Health Risks and Hazards

In addition to criteria air pollutants, individual projects may emit TACs. TACs collectively refer to a diverse group of air pollutants that may cause chronic (i.e., of long duration) and acute (i.e., severe but short-term) adverse effects on human health, including carcinogenic effects. 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. Thus, 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.

Unlike criteria air pollutants, TACs are not subject to ambient air quality standards but are regulated by air districts using a risk-based approach to determine which sources and which pollutants to control as well as the degree of control. A *health risk assessment* (HRA) is an analysis that estimates human health exposure to toxic substances, and when considered together with information regarding the toxic potency of the substances, a HRA provides quantitative estimates of health risks.⁴

The Office of Environmental Hazard Health Assessment and the BAAQMD provide guidelines for conducting HRAs. Exposure assessment guidance published by the BAAQMD in January 2016 uses the assumption that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years.⁵ Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposure to fine PM (PM_{2.5}) is strongly associated with mortality, respiratory diseases, and poor lung development in children, and other health effects, such as hospitalization for cardiopulmonary disease (San Francisco Department of Public Health, 2008). Diesel particulate matter (DPM), a byproduct of diesel fuel combustion, is also of concern. CARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.⁶ The estimated cancer risk from exposure to DPM is much higher than the risk associated with any other TAC routinely measured in the region. DPM is discussed further, below.

In addition to monitoring criteria air pollutants, the Bay Area's air toxics network includes 16 monitoring sites, five of which were established by the CARB and are maintained by the BAAQMD. The remaining 11 sites are operated by the BAAQMD. These stations measure concentrations of volatile organic compounds (VOC), polycyclic aromatic hydrocarbons, and metals categorized as TACs. The TACs selected for monitoring are those that traditionally have been found in the highest concentrations in ambient air and therefore tend to produce the most

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

⁵ BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment Guidelines*, December 2016. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, accessed September 15, 2021.

⁶ California Air Resources Board (CARB), 1998. *Fact Sheet: The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines*, October 1998. Available online: <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/dieseltac/factsht1.pdf>, accessed September 15, 2021.

significant risk. However, there are no monitoring stations in the immediate vicinity of the amended DTPP area that measure ambient concentrations of carcinogenic TACs.

Roadway-Related Pollutants

Motor vehicles are responsible for a large share of air pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases, and vehicles also contribute to particulates by generating road dust and tire wear. Epidemiologic studies have demonstrated that people living close to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections, and decreased pulmonary function and poor lung development in children. Air pollution monitoring conducted in conjunction with epidemiologic studies has confirmed that roadway-related health effects vary with modeled exposure to PM and NO₂. In traffic-related studies, the additional non-cancer health risk attributable to roadway proximity was seen within 1,000 feet of the roadway and was strongest within 300 feet.⁷ As a result, CARB recommends that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying more than 100,000 vehicles per day. CARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, CARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.⁸ Sometimes, suggesting project design changes or mitigation measures in the project review phase can also reduce or avoid potential impacts. This underscores the importance of addressing potential incompatible land uses as early as possible in the project review process, ideally in the general plan itself. Consistent with this recommendation, Policy PS-2.6 of the Redwood City General Plan requires all land uses proposed within 500 feet of U.S. 101, El Camino Real, and Woodside Road that will house, accommodate, or serve sensitive receptors to incorporate appropriate design and construction features (e.g., filters on HVAC systems) that reduce potential exposure of persons to pollutants.

Diesel Particulate Matter

CARB identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. CARB estimated average bay area cancer risk from exposure to diesel particulate, based on a population-weighted average ambient diesel particulate concentration, at about 480 in one million as of the year 2000, which is much higher than the risk associated with any other toxic air pollutant routinely measured in the region.

⁷ CARB, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available online: <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed September 15, 2021.

⁸ CARB, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available online: <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed September 15, 2021.

In 2000, CARB approved a comprehensive *Diesel Risk Reduction Plan* to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Subsequent CARB regulations apply to new trucks and diesel fuel. With new controls and fuel requirements, 60 trucks built in 2007 would have the same particulate exhaust emissions as one truck built in 1988.⁹ The regulation was anticipated to result in an 80 percent decrease in statewide diesel health risk in 2020 as compared with the diesel risk in 2000. Many of the measures of the *Diesel Risk Reduction Plan* have been approved and adopted, including the federal on-road and off-road¹⁰ diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California. Subsequent regulations regarding on-road diesel truck retrofits with particulate matter controls, 2010 or later engine standards, and fleet average emission rate standards to increase vehicle turnover have resulted in much lower DPM and PM_{2.5} emissions over time. It is estimated that these regulations reduced diesel particulate emissions 78 percent from 1990 levels.¹¹ Despite notable emission reductions, CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses.

12.1.6 Existing Sources of Air Pollution in the DTPP Area

The BAAQMD's inventory of permitted stationary sources of emissions shows twenty-four permitted stationary emission facilities present within and within 1,000 feet of the boundaries of the amended DTPP area. The vast majority of these sources are permitted facilities that include stationary diesel engines for power generators and fuel stations.

There are no freeways within 1,000 feet of the amended DTPP area. Highway 101 is located approximately 1,400 to the north of the area while Highway 84 is located 1,900 feet to the southeast. Traffic on arterial roadways within and in the vicinity of the amended DTPP area such as El Camino Real, Jefferson Avenue, Middlefield Road, Veterans Boulevard, Brewster Avenue and Broadway contribute to concentrations of PM_{2.5}, DPM, and other air contaminants emitted from motor vehicles near the street level. Other "non-permitted" mobile sources of air pollution (e.g., railyards, trucking distribution facilities, and high-volume fueling stations) located in the vicinity of the amended DTPP area include Caltrain operations.

12.1.7 Odors

Odors are generally regarded as an annoyance rather than a health hazard. The ability to detect odors varies considerably among the population and is subjective. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Odor impacts should be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Odor sources typically include wastewater treatment plants, landfills,

⁹ Pollution Engineering, 2006. *New Clean Diesel Fuel Rules Start*, July 2, 2006, Available online: https://sj-admin.s3-us-west-2.amazonaws.com/2006_0700-PollutionEngineering_NewCleanDiesel.pdf, accessed February 2, 2022.

¹⁰ Non-road is the term EPA uses for vehicles and equipment that are not on-road, where in California this term is off-road.

¹¹ CalMatters, 2021. *New Study: California's Trailblazing Diesel Rules Save Lives*, March 26, 2021. Available online: <https://calmatters.org/environment/2021/03/california-diesel-rules>, accessed February 2, 2022.

confined animal facilities, composing stations, food manufacturing plants, refineries, and chemical plants.¹²

12.1.8 Sensitive Receptors

Air quality does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. More sensitive population groups include: the elderly and the young; those with higher rates of respiratory disease, such as asthma and chronic obstructive pulmonary disease; and those with other environmental or occupational health exposures (e.g., indoor air quality) that affect cardiovascular or respiratory diseases. The BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, daycare centers, hospitals, and senior-care facilities. Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration to ensure the health and well-being of their employees.¹³

The proximity of sensitive receptors to motor vehicles is an air pollution concern, especially in urban areas where building setbacks are limited and roadway volumes are higher than suburban locations of the bay area. Vehicles also contribute to particulates by generating road dust and through tire wear.

Working from north to south, the northernmost sensitive receptors adjacent to the amended DTPP area consist of new multifamily residences on the 600 block of El Camino Real and along the 700 block of Arguello Street. Additionally, there are multiple residential units (both single- and multi-family) along Brewster Avenue from Veterans Boulevard to Arguello Street. There are multi-family residential units on Veterans Boulevard between Middlefield Road and Jefferson Avenue.

Although the Sequoia High School campus is located south of Brewster Avenue and west of El Camino Real, the school uses adjacent to the amended DTPP area are primarily athletic fields, and academic buildings are located over 600 feet to the west of El Camino Real. There are single-family residential uses along James Avenue and on Arch Street, approximately 150 feet west of El Camino Real.

To the south, there are multi-family residential units above ground floor commercial at One Franklin Street at the corner of Jefferson Avenue with additional multi-family residential extending along the east side of Franklin Street to Maple Street to the south. There is also a multi-family residential building at 1090 Main Street at the intersection of Main Street and Maple Street and single-family residences along the southeast side of Maple Street between Middlefield Road and Spring Street.

¹² BAAQMD, 2017. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

¹³ Bay Area Air Quality Management District (BAAQMD), 2011. *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May 2011. Available online: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/baaqmd-modeling-approach.pdf>, accessed February 2, 2022.

12.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR. DTPP EIR Chapter 12, *Air Quality*, Section 12.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the SFBAAB. The Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various non-governmental organizations also participate in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The BAAQMD is responsible for attaining and/or maintaining air quality in the region within federal and state air quality standards. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and state standards. The BAAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The BAAQMD also regulates new or expanding stationary sources of TACs and requires air toxic control measures for many sources emitting TACs.

12.2.1 Federal and State Attainment Designations for Criteria Air Pollutants

Pursuant to the 1990 Federal Clean Air Act Amendments, the U.S. EPA classifies air basins (or portions thereof) as “attainment”, “nonattainment”, or “unclassified” for each criteria air pollutant, based on whether or not the national standards had been achieved. As shown in **Table 12-5**, at the federal level, the SFBAAB is designated as a nonattainment area for the 8-hour ozone standard and the federal 24-hour PM_{2.5} standard. The SFBAAB is in attainment for all other federal ambient air quality standards.

The California Clean Air Act (California Health and Safety Code section 39600 et seq.) passed in 1988, like its federal counterpart, calls for designation of areas as “attainment”, “nonattainment”, or “unclassified” with respect to the state standards. The SFBAAB is currently designated as nonattainment for the state 8-hour and 1-hour ozone standards, the state average and 24-hour PM₁₀ standards, and the state average PM_{2.5} standards. The SFBAAB is designated as attainment or unclassified with respect to the other state standards.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAA added requirements for states containing areas that violate the national standards to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies

with jurisdiction over them. The U.S. EPA has the responsibility to review all SIPs to determine if they conform to the mandates of the FCAA and will achieve air quality goals when implemented.

**TABLE 12-5
SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS**

Pollutant	Averaging Time	Designation/Classification	
		State Standards	Federal Standards
Ozone	8 Hour	Nonattainment	Nonattainment
	1 Hour	Nonattainment	--
Carbon Monoxide	8 Hour	Attainment	Attainment
	1 Hour	Attainment	Attainment
Nitrogen Dioxide	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	Attainment
Sulfur Dioxide	24 Hour	Attainment	--
	1 Hour	Attainment	--
	Annual Arithmetic Mean	--	--
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	--
	24 Hour	Nonattainment	Unclassified
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Nonattainment	Unclassified/Attainment
	24 Hour	--	Nonattainment
Sulfates	24 Hour	Attainment	--
Lead	30 Day Average	--	Attainment
	Calendar Quarter	--	Attainment
	Rolling Month Average	--	--
Hydrogen Sulfide	1 Hour	Unclassified	--
Vinyl Chloride	24 Hour	No information available	--
Visibility Reducing Particles	8 Hour	Unclassified	--

SOURCE: BAAQMD, 2017. *Air Quality Standards and Attainment Status*, last updated January 5, 2017. Available online: <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>, accessed February 2, 2022.

California Building and Energy Efficiency Standards (Title 24)

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce emissions of criteria pollutants or TACs, increased energy efficiency and reduced consumption of natural gas and other fuels would also result in lower criteria pollutant and TAC emissions from residential and non-residential buildings subject to these standards. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods.¹⁴

¹⁴ California Energy Commission. 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, December 2018. Available online: https://www.energy.ca.gov/sites/default/files/2021-06/CEC-400-2018-020-CMF_0.pdf. Accessed January 30, 2022.

The most recent update to the Title 24 energy efficiency standards (2019 standards) went into effect on January 1, 2020. On August 11, 2021, the CEC adopted the next update, the 2022 Energy Code which was approved by the California Building Standards Commission for inclusion into the California Building Standards Code.¹⁵ The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic (PV) and battery storage standards, strengthens ventilation standards, and more. Building permit applications submitted on or after January 1, 2023, must comply with the 2022 Energy Code. The 2022 Update includes measures that will reduce energy use in single family, multifamily, and nonresidential buildings. These measures will:

1. Affect newly constructed buildings by adding new prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California;
2. Require PV and battery storage systems for newly constructed multifamily and selected nonresidential buildings;
3. Update efficiency measures for lighting, building envelope, heating, ventilation, and air conditioning (HVAC); and
4. Make improvements to reduce the energy loads of certain equipment covered by (i.e., subject to the requirements of) the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

As future updates to the Title 24 standards are rolled out, development within the amended DTPP area would be required to adhere to the current version of Title 24 at that time, as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits.

California Green Building Standards Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. Like the Title 24 Part 6 standards, compliance with the CALGreen Code also reduces criteria pollutant and TAC emissions. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the new measures took effect on

¹⁵ CEC. 2022. 2022 Building Energy Efficiency Standards, 2022. Available online: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed January 30, 2022.

January 1, 2020.¹⁶ The 2019 standards prescribe Electric Vehicle (EV) charging requirements for residential and non-residential buildings.

The next 2022 CALGreen update simplifies the code and its application in several ways. It offers new voluntary prerequisites for builders to choose from, such as battery storage system controls and heat pump space, and water heating, to encourage building electrification. While the 2019 CALGreen Code only requires provision of EV Capable spaces with no requirement for chargers to be installed at multifamily dwellings, the 2022 CALGreen code mandates chargers.¹⁷

12.2.2 Regional Plans and Regulations

BAAQMD Clean Air Plan

Since the DTPP Final EIR, the regional air quality plan for the SFBAAB has been updated twice pursuant to air quality planning requirements defined in the California Health & Safety Code, with the most recent update in 2017. The *2017 Clean Air Plan: Spare the Air, Cool the Climate*¹⁸ was adopted on April 19, 2017 by the BAAQMD in cooperation with the MTC, the San Francisco Bay Conservation and Development Commission, and the ABAG to provide a regional strategy focusing on two closely-related goals: protecting public health and protecting the climate.

To fulfill state ozone planning requirements, the 2017 Clean Air Plan includes all feasible measures to reduce emissions of ozone precursors ROG and NO_x, and reduce transport of ozone and its precursors to neighboring air basins. In addition, the plan builds upon and enhances the BAAQMD's efforts to reduce emissions of PM₁₀, PM_{2.5}, and TACs. The 2017 Clean Air Plan contains 85 control measures categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.

BAAQMD CEQA Guidelines and Thresholds of Significance

The *BAAQMD CEQA Air Quality Guidelines* is an advisory document that provides lead agencies, consultants, and project proponents with procedures for assessing air quality impacts and preparing environmental review documents. The document describes the criteria that BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects and plans would have significant adverse environmental impacts, identifies methods for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

¹⁶ California Building Standards Commission (CBSC). 2019. *Guide to the 2016 California Green Building Standards Code Nonresidential*. November 2019. Available online: <https://cdn-codes-pdf.iccsafe.org/uploads/bookpdfs/Guide%20to%202019%20CALGreen%20Build%20Stand%20NonRes.pdf>. Accessed January 27, 2022.

¹⁷ California Housing and Community Development. n.d. 2022 CALGreen, no date. Available online: <https://catc.ca.gov/~media/ctc-media/documents/ctc-meetings/2021/2021-04/tab-2-hcd-pres-a11y.pdf>. Accessed January 30, 2022.

¹⁸ BAAQMD, 2017. Final 2017 Clean Air Plan – Spare the Air, Cool the Climate, April 19, 2017. Available online: https://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 February 3, 2022.

BAAQMD updated the 1999 CEQA Air Quality Guidelines in 2010. In May 2011, BAAQMD adopted an updated version of its thresholds of significance for use in determining the significance of environmental effects under CEQA, and published its CEQA Guidelines for consideration by lead agencies. The 2011 CEQA Guidelines thresholds lowered the previous (1999) thresholds of significance for annual emissions of ROG, NO_x, and PM₁₀, and set a standard for PM_{2.5} and fugitive dust. The 2011 CEQA Guidelines also included methods for evaluating risks and hazards for the siting of stationary sources and of sensitive receptors.

The BAAQMD resolution adopting the significance thresholds in 2011 was set aside by the Alameda County Superior Court on March 5, 2012. On August 13, 2013, the California Court of Appeals issued a full reversal of the Superior Court's judgment, and on December 17, 2015, the California Supreme Court reversed in part the appellate court's judgment and remanded the case for further consideration consistent with the Supreme Court opinion. The California Supreme Court ruled unanimously that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project" (*California Building Industry Association v. Bay Area Air Quality Management District* [December 17, 2015] 62 Cal.4th 369).¹⁹ The Supreme Court confirmed that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future residents or users." The Court also held that when a project has "potentially significant exacerbating effects on existing environmental hazards" those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on "existing conditions" rather than impacts of the environment on the project.

BAAQMD most recently updated its *CEQA Air Quality Guidelines* in May 2017.²⁰ These guidelines provide recommended quantitative significance thresholds along with direction on recommended analysis methods. BAAQMD states that the quantitative significance thresholds are "advisory and should be followed by local governments at their own discretion," and that lead agencies are fully within their authority to develop their own thresholds of significance. However, BAAQMD offers these thresholds for lead agencies to use in order to inform environmental review for development projects in the Bay Area. Lead agencies may also reference the *CEQA Thresholds Options and Justification Report* developed by BAAQMD staff in 2009. This option provides lead agencies with a justification for continuing to rely on the BAAQMD 2011 thresholds.

BAAQMD Rules and Regulations

As discussed earlier, the BAAQMD is the regional agency responsible for rulemaking, permitting and enforcement activities affecting stationary sources in the Bay Area. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures that must be implemented in association with various uses and activities. These rules regulate not only emissions of the six criteria air pollutants, but also toxic emissions and acutely hazardous non-radioactive materials

¹⁹ *California Building Industry Association V. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion Filed December 17, 2015.

²⁰ BAAQMD, 2017. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

emissions. Emissions sources subject to these rules are regulated through the BAAQMD's permitting process and standards of operation. Through this permitting process, including an annual permit review, the BAAQMD monitors generation of emissions from stationary sources and uses this information in developing its air quality plans. Any stationary sources of emissions proposed as part of the DTPP Plan-wide Amendments would be subject to applicable BAAQMD Rules and Regulations. Both federal and state ozone plans rely heavily upon stationary source control measures set forth in BAAQMD's Rules and Regulations.

The BAAQMD Rules and Regulations applicable to the proposed DTPP Plan-Wide Amendments include, but are not limited to, the following:

- **Regulation 2, Rule 1 (General Permit Requirements), Rule 2 (New Source Review), and Rule 5 (New Source Review of Toxic Air Contaminants).** Under these rules, all stationary sources (e.g., diesel-powered generators and fire pumps) that have the potential to emit TACs above a certain level are required to obtain permits from BAAQMD. These rules provide guidance for the review of new and modified stationary sources of TAC emissions, including evaluation of health risks and potential mitigation measures. Sources of HAPs may also be required to implement Maximum Achievable Control Technology. The California Building Code Section 2702.2.15 requires emergency and standby power (frequently accomplished by installation of diesel generators) to be provided in buildings with occupied floors located more than 75 feet above the lowest level of fire department vehicle access. The BAAQMD recently updated its BACT requirement for emergency generators greater than 1,000 horsepower (hp) to achieve EPA Tier 4 standards.²¹ Fire pumps, which are also often diesel-powered, are essential components of a building's fire protection system, especially in taller structures and are critical in distributing water through sprinkler systems where water pressure from water mains and firefighting equipment cannot reach.
- **Regulation 6, Rule 2 (Commercial Cooking Equipment).** This rule applies to operators of both chain-driven and under-fired char broilers; it includes requirements for the installation of emission control devices and imposes emissions limits for PM₁₀ and organic compounds per pounds of beef cooked. This rule also includes requirements for the maintenance of emissions control devices installed or operated under this rule. Food service establishments under the proposed DTPP Plan-Wide Amendments would be subject to this rule.
- **Regulation 6, Rule 6 (Prohibition of Trackout).** This measure controls trackout of solid material onto public paved roads from large bulk material sites, large construction sites, and large disturbed area sites. Under this regulation, the owners and operators of a construction site are required to clean up trackout on public roadways within four hours of identification and at the conclusion of each workday. The rule also includes requirements regarding the emission of fugitive dust during cleanup of trackout, and requirements for monitoring and reporting trackout at regulated sites. Construction activities associated with development pursuant to the DTPP Plan-Wide Amendments would be subject to this rule.
- **Regulation 7 (Odorous Substances).** This regulation specifies limits for the discharge of odorous substances where BAAQMD receives complaints from 10 or more complainants within a 90-day period. Among other things, Regulation 7 prohibits the discharge of an

²¹ BAAQMD, 2021. Revised BACT Guideline for Diesel backup Generators > 1000 BHP, Frequently Asked Questions, March 17, 2021. Available online: https://www.baaqmd.gov/~media/files/engineering/backup-diesel-generators/faq_bact_for_large_diesel-pdf.pdf?la=en, accessed February 3, 2022.

odorous substance that causes the ambient air at or beyond the property line to be odorous after dilution with four parts of odor-free air (i.e., 5 D/T), and specifies maximum limits on the emission of certain odorous compounds. Food service establishments proposed under the DTPP Plan-Wide Amendments would be subject to this rule, although it would apply to any sources of odor that lead to public complaints.

- **Regulation 8, Rule 3 (Architectural Coatings).** Through this rule the BAAQMD regulates the quantity of VOCs in architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured. This rule imposes VOC content limits on architectural coatings and includes requirements for painting practices, solvent usage and storage, and compliance monitoring and reporting practices. Application of architectural coatings associated with new construction and maintenance activities resulting from the DTPP Plan-Wide Amendments would be subject to this rule.
- **Regulation 9, Rule 8 (Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines).** This rule regulates emissions of NO_x and CO from stationary internal combustion engines and imposes emissions limits on spark-ignited engines powered by waste and fossil-derived fuels, compression-ignited engines, and dual fuel pilot compression-ignited engines. The rule also limits the hours of operation for emergency standby engines, which must be equipped with a non-resettable totalizing meter that measures either hours of operation or fuel usage. Usage records must be kept for two years and be available for inspection by BAAQMD. Any emergency generators proposed as part of development pursuant to the DTPP Plan-Wide Amendments would be subject to this rule.
- **Regulation 11, Rule 2 (Asbestos Demolition, Renovation, and Manufacturing).** This rule regulates emissions of asbestos to the atmosphere during demolition, renovation, milling, and manufacturing. It prohibits the use of asbestos on certain roadways, in molded insulating materials, and on buildings during construction, alteration, and/or repair. The rule also prohibits visible emissions from any operation involving the demolition, renovation, removal, manufacture, or fabrication of asbestos-containing products and includes required procedures for waste disposal and requirements for waste disposal sites to prevent emissions from asbestos-containing materials. This rule applies to demolition activities undertaken as part of development occurring as a result of the proposed DTPP Plan-Wide Amendments.
- **Regulation 14, Rule 1 (Bay Area Commuter Benefits Program).** BAAQMD aims to improve air quality, reduce emissions of GHGs and other air pollutants, and decrease traffic congestion through this rule. This program encourages employees to commute to work using alternative transportation modes by requiring employers to offer commuter benefits to all covered employees. Employers comply with this rule by offering a pre-tax benefit, and employer-paid benefit, or employer-provided transit. Alternatively, employers can comply with this rule through an alternative commuter benefit program that must be proposed in writing, must comply with the guidelines issued by the Air Pollution Control Officer, and must be approved in writing by the Air Pollution Control Officer. Employers are required to notify employees of which benefits will be offered and how to obtain these benefits. This rule applies to employers with 50 or more full-time employees.

Planning Healthy Places

In 2016, BAAQMD prepared its *Planning Healthy Places* guidebook to assist local governments, planners, elected officials, developers, community groups, and other parties in addressing and minimizing potential air quality issues associated with local sources of air pollutants, especially

TACs and PM. The guidebook provides best management strategies to reduce emissions and human exposure to pollutants that can be implemented in city or county general plans, neighborhood or specific plans, land use development ordinances, or individual projects.

BAAQMD has developed a map identifying areas where best management practices should be applied, and where further study is needed.²² As shown on the Planning Healthy Places map, the amended DTPP area is located in an area where the recommended best management practices should be applied to reduce exposure and subsequent health impacts associated with air pollution. Best management practices recommended by the Planning Healthy Places guidebook include a number of emissions reduction strategies. The goals and policies in the City's General Plan that address air quality and health risk exposure are consistent with these recommendations.

MTC/ABAG Sustainable Communities Strategy

The MTC is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area, which includes Santa Mateo County and Redwood City. On July 18, 2013, *Plan Bay Area* was jointly approved by the ABAG's Executive Board and by MTC.²³ The plan includes the region's Sustainable Communities Strategy (SCS), as required under SB 375, and the 2040 Regional Transportation Plan. Though the purpose of the SCS is to lay out how the region will meet GHG emissions reduction targets set by CARB, by concentrating future growth within Priority Development Areas (PDAs) and Transit Priority Areas (TPAs), the reduction in VMT will also reduce associated air pollutant emissions.²⁴ The amended DTPP area is located within both a Priority Development Area and a Transit Priority Area.²⁵

On July 26, 2017, MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original *Plan Bay Area* (2013), but with updated planning assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted.²⁶

Most recently, on October 21, 2021, the MTC and ABAG jointly adopted *Plan Bay Area 2050* as the official regional long-range plan for the Bay Area. *Plan Bay Area 2050* connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make

²² BAAQMD, 2016. Planning Healthy Places. Interactive Map of the Bay Area Showing Areas with Estimated Elevated Levels of Fine *and/or Toxic Air Contaminants*, posted May 20, 2016. Available online: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=51c2d0bc59244013ad9d52b8c35cbf66>, accessed February 3, 2022.

²³ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2013. Bay Area Plan – Strategy for A Sustainable Region, July 13, 2013. Available online: http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/Plan_Bay_Area.pdf. Accessed on January 30, 2022.

²⁴ To be eligible for designation as a Priority Development Area, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service, and planned for more housing. A Transit Priority Area is an area within one-half mile of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes.

²⁵ MTC, 2022. Priority Development Areas (Plan Bay Area 2050). Available online: <https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050/explore?location=37.476065%2C-122.151715%2C12.06>. Accessed February 15, 2022.

²⁶ MTC & ABAG. 2017. Plan Bay Area 2040. Adopted July 26, 2017. Available online: https://mtc.ca.gov/sites/default/files/Final_Plan_Bay_Area_2040.pdf. Accessed January 27, 2022.

the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies.²⁷ It will be several years before the regional transportation model and county transportation models are updated to reflect Plan Bay Area 2050 (the models currently incorporate data from Plan Bay Area 2040).

12.2.3 Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under AB 1807 (Tanner). A total of 243 substances have been designated TACs under California law, including the 189 (federal) Hazardous Air Pollutants.

The CARB In-Use Off-Road Diesel-Fueled Fleets Regulation (Off-Road Regulation) applies to all self-propelled off-road diesel vehicles 25 horsepower or greater used in California and most two-engine vehicles (except on-road two-engine sweepers). This includes vehicles that are rented or leased (rental or leased fleets). CARB's goal is to gradually reduce the state-wide construction vehicle fleet's emissions through turnover, repower, or retrofits. New engine emissions requirements were grouped into tiers based on the year in which the engine was built (CARB 2022a). In 2014, new engines were required to meet Tier 4 Final standards, which to date are the most stringent emissions standards for off-road vehicle engines. The goal of the In-Use Off-Road Diesel-Fueled Fleets Regulation is to reduce particulate matter (PM₁₀ and PM_{2.5}) and NO_x emissions from off-road heavy-duty diesel vehicles in California (CARB 2022e). This regulation also limits idling to 5 minutes, requires a written idling policy for larger vehicle fleets, and requires that fleet operators provide information on their engines to CARB and label vehicles with a CARB-issued vehicle identification number.

CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. As discussed above, CARB published Air Quality and Land Use Handbook: A Community Health Perspective in April 2005. This handbook is intended to give guidance to local governments in the siting of sensitive land uses near sources of air pollution. Recent studies have shown that public exposure to air pollution can be substantially elevated near freeways and certain other facilities such as ports, rail yards, and distribution centers. Sensitive receptor siting recommendations for applicable uses in the City of Redwood City are listed in **Table 12-6** below. CARB notes that these recommendations are advisory and should not be interpreted as defined "buffer zones," and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary CARB's position is that infill development, mixed

²⁷ MTC & ABAG. 2021. Plan Bay Area 2050, Adopted October 21, 2021. Available online: https://planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed January 28, 2022.

use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.²⁸

**TABLE 12-6
RECOMMENDATIONS FOR SITING NEW SENSITIVE LAND USES**

Source Category	Advisory Recommendations of Locations to Avoid
Freeways and High-Traffic Roads	500' of a freeway or urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Dry Cleaners Using Perchloroethylene	300' of any dry cleaning operation. For operations with two or more machines, provide 500'. For operations with three or more machines, consult the local air district. Also, do not site new sensitive receptors in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	300' of a large gas station, defined as a facility with a throughput of 3.6 million gallons per year or greater. A 50' separation is recommended for typical gas dispensing facilities.

SOURCE: CARB, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available online: <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed September 15, 2021.

Redwood City General Plan

Goals, policies and programs related to air quality in the current 2010 Redwood City General Plan²⁹ were included in the DTPP Final EIR. There have been no changes to them since the DTPP Final EIR.

Redwood City 2030 Climate Action Plan

The City of Redwood City *Climate Action Plan*³⁰ was developed as the community's roadmap for addressing climate change and increasing resiliency in adapting to the impacts of climate change. In California, aggressive climate change goals have been set by the State to curb GHG emissions, with local governments implementing much of the policy. The CAP establishes the goal of reducing carbon emissions 50 percent below 2005 levels by 2030, an interim step toward the ultimate goal of achieving carbon neutrality well before 2045. The CAP identifies 33 quantifiable emissions reduction measures in four sectors for Redwood City to reduce GHG emissions to achieve the 2030 and 2045 targets:

- **Transportation & Land Use.** Strategies encourage public transit use, changing commuting habits, and promoting transit-oriented land use planning to help reduce GHG emissions by reducing the number of miles driven by single passenger vehicles, and increasing housing near transit.

²⁸ CARB, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available online: <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed September 15, 2021.

²⁹ City of Redwood City, 2010. Redwood City General Plan – Public Safety Element, October 11, 2010. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/5109/635782756603530000>, accessed February 3, 2022.

³⁰ City of Redwood City, 2020. Climate Action Plan, November 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>, accessed on February 3, 2022.

- **Energy & Water.** Strategies address energy that is used in community and public facilities, as well as in water treatment and transportation and provide opportunities to reduce energy use, shift from natural gas to electricity, and reduce water consumption.
- **Solid Waste.** This includes emissions from solid waste generation and disposal. The primary goal is to reduce emissions by encouraging the community to reduce waste. The secondary goal is to divert it from the landfill through recycling and composting.
- **Food & Consumption.** This includes the goods and services bought from outside San Mateo County. This strategy explores how to reduce food waste, shop local, and curb unnecessary air travel.

Redwood City Reach Codes

Reach Codes are Amendments to the Energy and Green Building Standards Codes to reduce GHGs. Adopting Reach Codes create opportunities for local governments to lead initiatives on climate change solutions, clean air, and renewable energy. In September 2020, the Redwood City Council approved the Reach Codes ordinance³¹ that mandates electrification, solar readiness of buildings, provision of EV charging infrastructure, and energy efficiency for all new construction projects. The Reach Codes establish higher standards for new construction to provide environmental and health benefits to the community. The Redwood City Reach Codes focus on new residential, commercial, and multifamily buildings that will be seeking building permits after December 9, 2020. The ordinance does not apply to additions or alterations. The ordinance also exempts certain land uses, including 100 percent affordable housing and commercial kitchens. Additional discussion concerning the Reach Codes is provided in Chapter 13, *Climate Change*.

Redwood City Transportation Demand Management Ordinance

In December 2021, the City adopted a Transportation Demand Management (TDM) ordinance. The TDM ordinance requires all new development in the City that meet specified development thresholds (generally 25 or more units and/or 10,000 square feet or more commercial development, including office development) to develop a TDM plan and requires annual monitoring with financial incentives to meet specified targets. The City's TDM ordinance would reduce VMT and associated air pollutant emissions from development allowed by the DTPP Plan-Wide Amendments by incentivizing reduced vehicle trips and increased multimodal trips.

³¹ City of Redwood City, 2020. Ordinance 2487 – An Ordinance of the City of Redwood City Adding Article XV of Chapter 9 of the Redwood City Code to Adopt Local Amendments to 2019 Edition of the California Energy Code and Green Building Standards Codes, Together with Certain Amendments, Exceptions, Modifications and Additions Thereto, September 21, 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23035/637473438954470000>, accessed February 3, 2022.

12.3 Impacts and Mitigation Measures

12.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe air quality impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the DTPP Final EIR.

Criteria Air Pollutants

The analysis of criteria air pollutants on regional air quality has been conducted at a plan-level using significance thresholds recommended by the BAAQMD for programs and plans,³² and also considers whether future projects implemented under the proposed DTPP Plan-Wide Amendments could result in project-specific significant impacts. For programs and plans, the BAAQMD recommends that the analysis consider a comparison of the rate of increase in VMT to the rate of population growth to assess impact on regional air quality. For projects, the BAAQMD specifies project-level significance thresholds for criteria air pollutants.

Toxic Air Contaminants

The BAAQMD's current plan-level thresholds for health risks focus on avoiding or minimizing exposure of future sensitive receptors proposed as part of a plan to existing health risks. However, as detailed below, impacts of the environment on a project are no longer required to be analyzed under CEQA unless a project exacerbates existing impacts (see Non-CEQA Impacts of the Environment on the Project below). The BAAQMD does not provide guidance or thresholds for the analysis of health risks of a plan on existing sensitive receptors. In the absence of guidance from the BAAQMD, the discussion presented below provides a qualitative assessment of health risk impacts at the plan level, considering the likelihood that subsequent development allowed by the DTPP Plan-Wide Amendments, including Research and Development (R&D) Laboratory use that may potentially encompass life science R&D labs, would exceed project-level thresholds.

Health Effects of Criteria Air Pollutants

In a 2018 decision (*Sierra Club v. County of Fresno*, 6 Cal.5th 502, also referred to as *Friant Ranch*), the California Supreme Court held that CEQA requires disclosure of the potential for a project's emissions to affect human health when the project's criteria air pollutant emissions exceed applicable thresholds and contribute considerably to a significant cumulative impact. The decision requires EIRs to either: (1) make a "reasonable effort" to substantively connect the estimated amount of a given air pollutant a project will produce and the health effects associated with that pollutant, or (2) explain why such an analysis is infeasible.³³

³² BAAQMD, 2017. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

³³ *Sierra Club V. County of Fresno*, 6 Cal.5th at 510–511.

The Court also clarified that CEQA “does not mandate” that EIRs include “an in-depth risk assessment” that provides “a detailed comprehensive analysis ... to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population wide health risks associated with those levels of exposure.”³⁴

Typically, the health impact of a particular criteria pollutant is analyzed by air districts on a regional scale, based on how close the area is to attaining the ambient air quality standards. Because BAAQMD’s attainment plans and supporting air quality modeling tools are regional in nature, they are not typically used to evaluate the impacts of individual projects and plans on ambient concentrations of criteria air pollutants, or to correlate those impacts to potential resultant effects on public health. The complex nature of dispersion of criteria air pollutants and the complex atmospheric chemistry (especially in the case of ozone and fine particulate matter) limit the usefulness of applying the available models to predict health impacts on a project level. The accumulation and dispersion of air pollutant emissions within an air basin depends on the size and distribution of emission sources in the region and meteorological factors such as wind, sunlight, temperature, humidity, rainfall, atmospheric pressure, and topography. Various air districts in California agree that it is very difficult to quantify health impacts and that the specific tools and methods to use are still under development. Therefore, the health effects of criteria pollutants generated by the DTPP Plan-wide Amendments are discussed qualitatively in this analysis.

Non-CEQA Impacts of the Environment on the Project

As discussed in the Regulatory Setting,³⁵ CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project’s users or residents, except where a project would exacerbate an existing environmental condition. This analysis focuses on air quality impacts on the existing sensitive receptors from new emissions from the DTPP Plan-Wide Amendments, during both construction and operational phases. Existing emissions from off-site sources are addressed under cumulative conditions.

12.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the proposed DTPP Plan-Wide Amendments would:

- conflict with or obstruct implementation of the applicable air quality plan; or
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard; or
- expose sensitive receptors to substantial pollutant concentrations; or

³⁴ *Sierra Club V. County of Fresno*, 6 Cal.5th at 521.

³⁵ *California Building Industry Association V. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion Filed December 17, 2015.

- result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Table 12-7 summarizes the air quality and health risk significance thresholds recommended by the BAAQMD in its most recent CEQA Guidelines.

12.3.3 Impacts and Mitigation Measures

Impacts to air quality in the amended DTPP area would be somewhat different than those presented in the DTPP Final EIR because of changes to CEQA practice, which no longer considers impacts of the environment (e.g. existing air pollution emission sources) on proposed projects, and because of the desire to consider the potential impacts of development that may occur as a result of the Plan-Wide Amendments and provide for programmatic mitigation.

Impact AQ-1: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with or obstruct implementation of the applicable air quality plan. (*Less than Significant*)

DTPP Impact Summary

The DTPP Final EIR found the DTPP to be consistent with the Clean Air Plan applicable at the time (the Bay Area 2005 Ozone Strategy) resulting in a *less-than-significant* impact.

Project Impacts

In determining consistency with the Clean Air Plan, BAAQMD recommends that the analysis consider whether the project would:

- Support the primary goals of the Clean Air Plan;
- Include applicable control measures of the Clean Air Plan; and
- Avoid disrupting or hindering implementation of control measures identified in the Clean Air Plan.

The primary goals of the 2017 Clean Air Plan are to protect air quality and public health at the regional and local scale and protect the climate by reducing regional criteria air pollutant emissions and reducing local air quality-related health risks (by meeting state and national ambient air quality standards). To meet these goals, the 2017 Clean Air Plan includes 85 control measures aimed at reducing air pollutants in the SFBAAB.³⁶ These control measures are grouped into the following sectors: stationary (industrial) sources, transportation, energy, buildings, agriculture, natural and working lands, and waste management.

³⁶ BAAQMD, 2017. Final 2017 Clean Air Plan – Spare the Air, Cool the Climate, April 19, 2017. Available online: https://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 February 3, 2022.

**TABLE 12-7
BAAQMD SIGNIFICANCE THRESHOLDS**

Pollutant	Construction Threshold	Operational Threshold	
	Average Daily Emissions (ppd)	Average Daily Emissions (ppd)	Maximum Annual Emissions (tpy)
Plan-Level			
Criteria Air Pollutants and Precursors	None	1. Consistency with Current Air Quality Plan control measures, and 2. Projected VMT or vehicle trip increase is less than or equal to projected population increase.	
Risks and Hazards ^a	None	1. Overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas), and 2. Overlay zones of at least 500 feet from all freeways and high-volume roadways	
Project-Level			
ROG	54	54	10
NOx	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
PM ₁₀ /PM _{2.5} (fugitive dust)	Best Management Practices	None	
Risks and Hazards for new sources and receptors (Individual Project) ^a	Same as Operational Thresholds ^b	Compliance with Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute) Ambient PM _{2.5} increase: > 0.3 µg/m ³ annual average Zone of Influence: 1,000-foot radius from property line of source or receptor	
Risks and Hazards for new sources and receptors (Cumulative Threshold) ^a	Same as Operational Thresholds ^b	Compliance with Qualified Community Risk Reduction Plan OR Cancer risk of >100 in a million (from all local sources within Zone of Influence) Chronic Non-cancer risk of > 10.0 Hazard Index (from all sources within Zone of Influence) Ambient PM _{2.5} of > 0.8 µg/m ³ annual average (from all local sources within Zone of Influence) <u>Zone of Influence:</u> 1,000-foot radius from property line of source or receptor	

NOTES:

ppd = pounds per day; tpy = tons per year

^a The receptor thresholds were the subject of litigation in California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369. The use of the receptor thresholds is discussed in section 2.8 of these Guidelines.

^b The BAAQMD recommends that for construction projects that are less than one year duration, Lead Agencies should annualize impacts over the scope of actual days that peak impacts are to occur, rather than the full year.

SOURCE: BAAQMD, 2017b. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

The vast majority of the control measures included in the 2017 Clean Air Plan do not apply directly to the DTPP Plan-Wide Amendments or to development allowed by the DTPP Plan-Wide Amendments because the measures target facilities or land uses that do not currently exist and are not proposed in the amended DTPP area (e.g., energy generation, waste management, agricultural, forest or pasture lands); vehicles or equipment that would not be employed within the amended DTPP area (e.g., airplanes, farming equipment); and/or involve rulemaking or other actions under the jurisdiction of agencies not directly involved with design and approval of the DTPP Plan-Wide Amendments and its related actions. For example, the Agriculture, Natural and Working Lands, and Water measures address emissions sources are applicable to the BAAQMD's own programs and regional air quality planning, and are less applicable to local agencies' decisions and projects such as the proposed DTPP Plan-Wide Amendments. In addition, 40 of these measures address stationary sources (such as oil refineries and cement kilns, and large boilers used in commercial and industrial facilities) and will be implemented by the BAAQMD using its permit authority and are therefore not suited to implementation through local planning efforts.

Most of the control measures identified in the Clean Air Plan fall under the implementation responsibility of the BAAQMD and would not be directly applicable to the development in the amended DTPP area. However, development allowed by the DTPP Plan-Wide Amendments would include features required by regulations and locations close to transit facilities, that support implementation of transportation-, energy-, building-, waste-, and water conservation-related measures included in the 2017 Clean Air Plan. **Table 12-8** provides a consistency analysis of the proposed DTPP Plan-Wide Amendments with applicable control measures of the 2017 Clean Air Plan.

As shown in Table 12-8, required compliance with regulations from various agencies as well as the City, and implementation of new Mitigation Measures AQ-2a and AQ-2b required to mitigate Impact AQ-2 discussed below, would ensure that implementation of the proposed DTPP Plan-Wide Amendments would be consistent and support all applicable control measures from the 2017 Clean Air Plan.

Further, the proposed DTPP Plan-Wide Amendments would not cause the disruption or delay in the implementation of any Clean Air Plan control measures. Projects that would hinder implementation of control measures are projects that would preclude the extension of a transit line or bike path or projects that propose excessive parking beyond City parking requirements. The Plan-Wide Amendments propose policies that would promote a dense, walkable urban area near a concentration of regional and local transit services, including Redwood City Station, which is currently served by Caltrain and bus services from SamTrans.

In addition, the amended DTPP area is located within a Priority Development Area pursuant to ABAG's Sustainable Communities Strategy: Plan Bay Area 2050. This designation applies to new development areas that would support the day-to-day needs of residents and workers in a pedestrian-friendly environment served by transit. The proposed DTPP Plan-Wide Amendments would include pedestrian, bicycle, and transit enhancements to improve safety and connectivity to and from the relocated Redwood City Transit Center, including an expanded Caltrain Station, and

TABLE 12-8
CONSISTENCY WITH POTENTIALLY APPLICABLE CONTROL MEASURES
IN 2017 CLEAN AIR PLAN CONTROL MEASURES

Control Measure	Description	Consistency Analysis
Stationary Source Control Measures		
SS21: New Source Review for Air Toxics	SS21 addresses air toxics emissions through BAAQMD Rule 2-5, New Source Review of Toxic Air Contaminants.	Consistent. Any stationary sources such as any emergency generators proposed as part of the development within the amended DTPP area would be required to comply with BAAQMD Rule 2-5 at the time of project review.
SS25: Coating, Solvents, Lubricants, Sealants and Adhesives	SS25 will reduce emissions of ROG from architectural coatings and other materials by proposing more stringent ROG limits as appropriate.	Consistent. All subsequent development under the proposed DTPP Plan-wide Amendments would comply with all applicable BAAQMD rules and regulations regarding ROG emission limits.
SS30: Residential Fan Type Furnaces	SS30 will reduce emissions of NOx by creating more stringent limits on new and replacement central furnace installations. Strategies may include regulations regarding sale of fossil fuel-based space and water heating systems for residential and commercial use.	Consistent. All subsequent development under the Plan-wide Amendments would be required to use all-electric space and water heating systems for residential and commercial use, consistent with the Redwood City Reach Codes, with exceptions permitted only as set forth in the Reach Codes. '
SS32: Emergency Backup Generators	SS32 will reduce emissions of DPM, TACs, and criteria pollutants from emergency backup generators by enforcing Rule 11- 18, resulting in reduced health risks to impacted individuals. This measure will also have climate protection benefits through reduces GHG emissions.	Consistent. Any emergency backup generators proposed would be compliant with the regulations set forth in BAAQMD Rule 11-18.
SS36: PM from Trackout	SS36 developed Regulation 6, Particulate Matter; Rule 6: Trackout (Rule 6-6) to address mud and dirt that can be "tracked out" from construction sites, bulk material storage, and disturbed surfaces onto public paved roads where vehicle traffic will pulverize the mud and dirt into fine particles and entrain them into the air.	Consistent. All future construction activities associated with the proposed DTPP Plan-wide Amendments would implement BMPs required by the BAAQMD, as part of Mitigation Measure AQ-2a, Best Management Practices Required for all Subsequent Projects, which would reduce trackout of PM from construction sites.
SS38 Fugitive Dust	SS38 reduces particulate matter (PM ₁₀ & PM _{2.5}) fugitive dust emissions from traffic and other operations on construction sites, large disturbed surfaces, and other sources of fugitive PM emissions.	Consistent. All future construction activities pursuant to the proposed DTPP Plan-wide Amendments would implement dust control BMPs required by the BAAQMD as part of Mitigation Measure AQ-2a, Best Management Practices Required for all Subsequent Projects, to reduce fugitive dust.
Transportation Control Measures		
TR2: Trip Reduction Programs	TR2 includes a mandatory and voluntary trip reduction program. The regional Commuter Benefits Program, resulting from SB 1339, and similar local programs in jurisdictions with ordinances that require employers to offer pre-tax transit benefits to their employees are mandatory programs. Voluntary programs include outreach to employers to encourage them to implement strategies that encourage their employees to use alternatives to driving alone.	Consistent. Development in the amended DTPP area would comply with the 2010 General Plan's Goal BE-27 to create conditions to improve utilization of existing public transportation services to increase ridership.

TABLE 12-8 (CONTINUED)
CONSISTENCY WITH POTENTIALLY APPLICABLE CONTROL MEASURES
IN 2017 CLEAN AIR PLAN CONTROL MEASURES

Control Measure	Description	Consistency Analysis
Transportation Control Measures (cont.)		
TR5: Transit Efficiency and Use	TR5 will improve transit efficiency and make transit more convenient for riders through continued operation of 511 Transit, full implementation of Clipper® fare payment system and the Transit Hub Signage Program.	Consistent. The Redwood City Transit Center directly serves the amended DTPP area. El Camino Real, with SamTrans service, qualifies as a high-quality transit corridor since the frequency of service is 15 minutes or less during the morning and evening peak commute periods. The Clipper® fare payment system is available to be used on various transit operators including Caltrain and SamTrans. It is noted that 511 no longer provides trip planner service or transit agency schedules.
TR8: Ridesharing	TR8 promotes ridesharing services and incentives through the implementation of the 511 Regional Rideshare Program, as well as local rideshare programs implemented by Congestion Management Agencies. These activities will include marketing rideshare services, operating a rideshare information call center and website, and provide vanpool support services. In addition, this measure includes provisions for encouraging car sharing programs.	Consistent. Ridesharing services to the amended DTPP area are available through the 511 Regional Rideshare Program as well as other private rideshare programs.
TR9: Bicycle and Pedestrian Access and Facilities	<p>The bicycle component of TR9 strives to expand bicycle facilities serving employment sites, educational and cultural facilities, residential areas, shopping districts, and other activity centers. Typical improvements include bike lanes, routes, paths, and bicycle parking facilities. The bicycle component also includes a bike share pilot project that was developed to assess the feasibility of bicycle sharing as a first- and last-mile transit option.</p> <p>The pedestrian component of this measure is intended to improve pedestrian facilities and encourage walking by funding projects that improve pedestrian access to transit, employment sites, and major activity centers. Improvements may include sidewalks/paths, benches, reduced street width and intersection turning radii, crosswalks with activated signals, curb extensions/bulbs, buffers between sidewalks and traffic lanes, and street trees.</p>	Consistent. As discussed in Chapter 9, <i>Transportation and Circulation</i> , the proposed DTPP Plan-wide Amendments would be consistent with the General Plan transportation goals by maintaining and enhancing bicycle and pedestrian friendly facilities along the roadway system in the amended DTPP area. One of the objectives of the proposed DTPP Plan-wide Amendments includes making circulation improvements to ensure adequate vehicular, bicycle and pedestrian connections, which include a refined grid street network north of James Avenue. These network improvements would allow for wider sidewalks and improved pedestrian sight angles that allow for safe and efficient movement of people, encouraging non-motorized modes of travel. These pedestrian, bicycle, and transit improvements would be consistent with the circulation plan set forth in the DTPP area and are consistent with the City's General Plan goals. The proposed DTPP Plan-wide Amendments would locate a mix of office and residential land uses to promote walkable / bikeable/ transit trips.
TR10: Land Use Strategies	This measure supports land use patterns that reduce VMT and associated emissions and exposure to TACs, especially within infill locations and impacted communities.	Consistent. The proposed DTPP Plan-wide Amendments would comply with this measure as it would locate high density, transit-oriented, mixed use development of land uses in an infill location. It would locate a mix of land uses including residential, office, and retail uses in close proximity of existing transit services, thereby reducing the number of vehicle trips and VMT. The amended DTPP area is also located in a Priority Development Area and Transit Priority Area adjacent to the Transit Center which includes a regional Caltrain station SamTrans bus depot, and shuttle services. El Camino Real, with SamTrans service, qualifies as a high-quality transit corridor since the frequency of service is 15 minutes or less during the morning and evening peak commute periods.

TABLE 12-8 (CONTINUED)
CONSISTENCY WITH POTENTIALLY APPLICABLE CONTROL MEASURES
IN 2017 CLEAN AIR PLAN CONTROL MEASURES

Control Measure	Description	Consistency Analysis
Energy Control Measures		
EN1: Decarbonize Electricity Production	EN1 focuses on lowering carbon emissions by switching the fuel sources used in electricity generation. The measure would promote and expedite a transition away from fossil fuels used in electricity generation (i.e., natural gas) to a greater reliance on renewable energy sources (e.g., wind, solar). In addition, this measure would promote an increase in cogeneration, which results in useful heat in addition to electricity generation from a single fuel source.	Consistent. Electricity supplied to development in the amended DTPP area would be provided by Pacific Gas and Electric (PG&E) and Peninsula Clean Energy (PCE). PG&E and PCE are required to comply with SB 100 and the RPS.
EN2: Decrease Electricity Demand	EN2 would decrease electricity demand through the adoption of additional energy efficiency policies and programs.	Consistent. Development under the proposed DTPP Plan-wide Amendments would be subject to energy efficiency standards enforced through the California Building Efficiency Standards (CCR, Title 24, Part 6), California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen) and the Redwood City Reach Codes. Buildings constructed as part of the proposed DTPP Plan-wide Amendments would be designed to comply with the most recent version of Title 24 Building Energy Efficiency Standards and mandatory CALGreen measures.
Buildings Control Measures		
BL1: Green Buildings	BL1 seeks to increase energy efficiency and the use of on-site renewable energy for all types of existing and future buildings. The measure includes policy assistance, incentives, diffusion of public information, and targeted engagement and facilitation of partnerships in order to increase energy efficiency and on-site renewable energy in the buildings sector.	Consistent. In addition to compliance with the most recent version of Title 24 Building Energy Efficiency Standards and mandatory CALGreen measures, subsequent development in the amended DTPP area would be subject to the Redwood City Reach Codes, which require, among other things, onsite photovoltaic (PV) requirements.
BL2: Decarbonize Buildings	BL2 seeks to reduce GHG emissions, criteria pollutants and TACs by limiting the installation of space- and water-heating systems and appliances powered by fossil fuels. This measure is to be implemented by developing model policies for local governments that support low- and zero-carbon technologies as well as potentially developing a rule limiting the sale of natural-gas furnaces and water heaters.	Consistent. Subsequent development pursuant to the proposed DTPP Plan-wide Amendments would be subject to the Redwood City Reach Codes, which require, among other things, all-electric construction for new residential and non-residential buildings with no natural gas infrastructure, and photovoltaic (PV) requirements, with only limited exceptions (including for affordable housing and commercial kitchens). In addition, PCE, a community choice aggregation, offers clean energy to City residents, and would be available to future development allowed by the proposed DTPP Plan-wide Amendments.
BL4: Urban Heat Island Mitigation	This control measure aims to reduce the "urban heat island" phenomenon by increasing the application of "cool roofing" and "cool paving" technologies, as well as increasing the prevalence of urban forests and vegetation, through voluntary approaches and educational outreach.	Consistent. Development in the amended DTPP area would be required to be consistent with the Redwood City Tree Preservation Ordinance.

TABLE 12-8 (CONTINUED)
CONSISTENCY WITH POTENTIALLY APPLICABLE CONTROL MEASURES
IN 2017 CLEAN AIR PLAN CONTROL MEASURES

Control Measure	Description	Consistency Analysis
Natural and Working Lands Control Measures		
NW2: Urban Street Planting	NW2 promotes the planting of trees in urbanized settings to take advantage of the myriad benefits provided by these trees, including: shading to reduce both the "urban heat island" phenomenon and the need for space cooling, and the absorption of ambient criteria air pollutants as well as carbon dioxide.	Consistent. Development in the amended DTPP area would be required to be consistent with the Redwood City Tree Preservation Ordinance.
Waste Management Control Measures		
WA3: Green Waste Diversion	WA3 seeks to reduce the total amount of green waste being disposed in landfills by supporting the diversion of green waste to other uses.	Consistent. Subsequent projects in the amended DTPP area would be serviced by a waste hauler that offers residential and commercial composting services and that would be required to comply with the requirements of the California Integrated Waste Management Act and AB 341.
WA4: Recycling and Waste Reduction	WA4 seeks to reduce GHG emissions by diverting recyclables and other materials from landfills.	Consistent with AB 341 - Commercial Recycling and AB 1826 - Commercial Organics, commercial, business, or multifamily establishments that generate two cubic yards or more of solid and organic waste per week will be required to have a recycling and/or organics program.
Water Control Measures		
WR2: Support Water Conservation	WR2 seeks to promote water conservation, including reduced water consumption and increased on-site water recycling, in residential, commercial and industrial buildings for the purpose of reducing GHG emissions.	Consistent. To advance this measure, BAAQMD supports efforts of local governments to achieve and exceed state water use reduction goals by: disseminating best practices that reduce water consumption and increase on-site water recycling; encouraging the adoption of water conservation ordinances; and incorporating public outreach and education on water conservation into BAAQMD's outreach programs. BAAQMD also incorporates best practices for water use into local plan guidance, CEQA guidance, and other resources for cities and counties.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and AB 341	IWMA requires all California cities to divert 50-percent of all solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	Consistent. Recology San Mateo County is under contract with the City to provide solid waste and residential recycling services to Redwood City and is responsible for recycling and solid waste management in the City. Recology's services yield waste diversion results consistent with citywide recycling targets. These services would be supplied to all future development under the proposed DTPP Plan-wide Amendments. Consistent with AB 341 - Commercial Recycling and AB 1826 - Commercial Organics, all commercial, business, and multifamily establishments that generate enough solid and organic waste are required to have a recycling and/or organics program.

the greater Downtown and surrounding neighborhoods. The proposed DTPP Plan-Wide Amendments would reduce single-occupancy vehicle trips and be complimentary to the City's TDM Ordinance goals. Specifically, the proposed amendments to right-size/reduce parking ratios, incentivize shared parking, increase bicycle parking ratios, improve access to long-term and short-term bicycle parking, and improve multimodal access to the amended DTPP area would support the City's goal to increase multimodal access and reduce single-occupancy vehicle trips.

For these reasons, implementation of the proposed DTPP Plan-Wide Amendments would not obstruct implementation of any measures in the 2017 Clean Air Plan that aim to improve connectivity and reduce transportation-related emissions. Therefore, the proposed DTPP Plan-Wide Amendments would be consistent with the BAAQMD's 2017 Clean Air Plan and would not result in new or more severe impacts than what was identified in the DTPP Final EIR. Therefore, this impact would be *less than significant*.

Mitigation: None required.

Impact AQ-2: Implementation of the DTPP Plan-Wide Amendments would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Significant and Unavoidable with Mitigation)

DTPP Impact Summary

The DTPP Final EIR found that the projected rate of increase in vehicle trips under the DTPP would be less than the rate of increase in population. Therefore, the regional air quality impacts from criteria pollutant and ozone precursor emissions associated with the DTPP were found to be *less than significant*.

Project Impacts

For a plan-level analysis, the BAAQMD recommends that the significance of the impact of criteria air pollutant emissions generated be based on consistency with regional air quality planning, including an evaluation of population growth and growth in VMT.³⁷ For a proposed plan to result in a less-than-significant impact from criteria air pollutants, an analysis must demonstrate that the plan's growth in VMT would not exceed the plan's population growth. This analysis is presented below, followed by an analysis that considers whether development allowed by the proposed DTPP Plan-Wide Amendments could exceed quantitative (project-level) thresholds of significance for criteria pollutants, requiring mitigation.

³⁷ BAAQMD, 2017. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

Comparison of Growth in VMT with Growth in Population

Based on the transportation analysis, the service population (residents plus employees) of the area due to development pursuant to the Plan-wide Amendments would increase by approximately 62 percent, from the Existing scenario to 2040 with buildout of the proposed DTPP Plan-Wide Amendments, as shown in **Table 12-9**.

TABLE 12-9
INCREASE IN VMT VERSUS SERVICE POPULATION GROWTH

	Existing	2040 DTPP Plan-wide Amendments Buildout	% Increase
Service Population	14,538	23,559	62%
VMT^a	538,413	755,338 ^b	40%

NOTE:

^a VMT data provided by Fehr & Peers.

^b VMT estimates shown account for a six percent trip reduction due to implementation of the City's TDM Ordinance.

SOURCE: Table compiled by ESA in 2022

The transportation analysis also estimates that total VMT associated with the implementation of the proposed DTPP Plan-Wide Amendments would increase by approximately 40 percent, from the Existing scenario to 2040 with buildout of the proposed DTPP Plan-Wide Amendments. These VMT estimates account for a trip reduction of six percent to reflect the City's required TDM Ordinance, which would apply to all future projects allowed under the proposed DTPP Plan-Wide Amendments. As shown in Table 12-9, the rate of increase in VMT would be less than the rate of population growth with the implementation of the DTPP Plan-Wide Amendments.

The BAAQMD Justification Report³⁸ explains that the impact to air quality is not necessarily growth but where that growth is located. Because transportation sources typically constitute the largest percent of air quality emissions generated from land use development projects and plans, a comparison of the rate of increase in VMT to growth rate (represented by the service population growth that includes residential population and employment growth), is a good indicator if planned growth will impact air quality of the area. Compact infill development well served by transit services, such as the proposed DTPP Plan-Wide Amendments, inherently generates less vehicle travel and more transit opportunities than suburban sprawl to accommodate the same amount of growth. Because the rate of increase in VMT would be less than the rate of service population growth, the proposed DTPP Plan-Wide Amendments would result in a ***less-than-significant*** impact with respect to regional criteria air pollutants when analyzed by comparing the rate of population growth to the rate of VMT growth.

Nonetheless, the Plan-Wide DTPP Amendments would indirectly result in development of new residential and office uses. These development projects would entail demolition and removal of existing structures, excavation, site preparation, and construction of new buildings. They would

³⁸ BAAQMD staff analyzed various options for CEQA air quality thresholds of significance for use within BAAQMD's jurisdiction. The analysis and evaluation undertaken by BAAQMD staff is documented in the Revised Draft Options and Justification Report – California Environmental Quality Act Thresholds of Significance (Draft Options Report) (BAAQMD October 2009).

also would include utility improvements that would likely be required in conjunction with such development projects (e.g., installation of recycled water pipelines and potential upgrades, for at least certain projects, of potable water, wastewater, and/or storm drain pipes). Emissions generated during construction activities, including utility work, would include exhaust emissions from the use of heavy-duty off-road diesel equipment, on-road diesel trucks, and employee vehicles; fugitive dust emissions associated with earth-disturbing activities and other demolition and construction work; and fugitive ROG emissions from paving and architectural coatings. Emissions generated during operation of new development would include emissions from motor vehicle trips to and from the proposed uses, building energy use, any stationary sources such as backup generators and area sources (landscaping equipment, consumer products and architectural coatings associated with maintenance activities).

Screening criteria based on development type and size (Table 3-1 of the *2017 BAAQMD CEQA Air Quality Guidelines*) are used to determine if construction or operational emissions from individual projects would likely result in a cumulatively considerable net increase in non-attainment criteria air pollutants. A project that exceeds the screening criteria generally requires a detailed air quality assessment to determine whether criteria air pollutant emissions would exceed significance thresholds.³⁹ Projects that are below the screening criteria would not require future analysis and the impact of criteria pollutant emissions from those projects are presumed to be less than significant.

Construction Emissions

Activities that generate dust include demolition, grading and excavation (including for utility work), and equipment movement on unpaved construction areas. Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Fugitive dust from construction activities can also be wind-blown and that adds to the particulate matter concentrations in the local atmosphere leading to *potentially significant* impacts.

The BAAQMD has taken a qualitative approach to addressing fugitive dust emissions from construction activities and considers any project that implements the BAAQMD Basic Construction Mitigation Measures Recommended for All Projects (Best Management Practices) to not result in a significant impact with respect to fugitive dust. Implementation of new **Mitigation Measure AQ-2a: Best Management Practices for Construction Dust Suppression**, provided below, includes BAAQMD recommended measures to address fugitive dust from construction activities and would apply to all subsequent projects developed as part of the proposed Plan-wide Amendments.

Estimating exhaust emissions generated by construction activities (i.e. construction equipment and vehicles) requires project-specific data regarding construction schedule and phasing for both building site excavation and construction and for off-site utility improvements, and equipment needs (equipment type and number, horsepower, activity level). If estimated emissions are found

³⁹ BAAQMD, 2017. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.

to exceed the BAAQMD's project-level significance thresholds for construction, they would contribute to a cumulatively considerable net increase in criteria pollutants for which the SFBAAB is in nonattainment. Projects requiring substantial ground disturbance, constructed on extremely compressed construction schedules, or requiring specialty equipment could lead to exceedance of the significance thresholds.

Because at least some development allowed by the proposed DTPP Plan-Wide Amendments would likely exceed BAAQMD screening criteria and the specific characteristics of each subsequent project are not currently known, this impact is conservatively considered to be *potentially significant*.

Operational Emissions

Individual projects allowed by the proposed DTPP Plan-Wide Amendments would generate operational emissions from a variety of sources. The primary operational sources of emissions are motor vehicle trips generated by the proposed land uses, energy use in buildings, area sources (landscaping equipment, use of consumer products, re-application of architectural coatings as part of maintenance activities, etc.), and any stationary sources such as diesel fueled fire pumps and emergency generators. As described below, exceedances of the significance thresholds in larger projects are likely to result from NOx and PM emissions from transportation sources, NOx emissions from energy use, and ROG emissions from area sources, specifically consumer products.

The primary source of operational criteria pollutant emissions would be motor vehicle trips generated by the land uses proposed by individual projects. However, proximity of projects to transit facilities in the area would help reduce vehicle trips, VMT, and associated air pollutant emissions. In addition, implementation of the City's mandatory TDM Ordinance would further reduce vehicle trips and associated air pollutant emissions. Further, Redwood City has adopted Ordinance 2487 approving "Reach Codes" that amend the State's Title 24 Energy and Green Building Standards Codes and specify EV charging requirements for new construction to facilitate future installation and use of electric chargers. Reach codes are local building energy-related codes that "reach" beyond the state minimum requirements for energy use in building design and construction. The Redwood City Reach Codes apply to all new residential, commercial, and multifamily buildings. Mitigation Measure CC-1 would require that EV charging infrastructure be provided consistent with the City's Reach Codes or the applicable Tier 2 CALGreen standards in effect at the time that a building permit application is filed, whichever is more restrictive. The provision of EV charging would encourage use of electric vehicles and reduce VMT and associated emissions from fossil-fueled vehicles.

The second major source of criteria pollutant emissions in land use development projects is energy use in buildings from the combustion of natural gas for space and water heating. However, consistent with the City's Reach Codes, newly constructed buildings would be required to be all-electric buildings, with certain exceptions. An all-electric building is a building that has no natural gas or propane plumbing installed within the building and that uses electricity as the source of energy for its space conditioning, water heating (including pools and spas), cooking appliances,

and clothes drying appliances.⁴⁰ Exceptions may be granted to non-residential buildings containing kitchens and residential buildings that contain only low-income units as long as the natural gas burning devices do not have a continuously burning pilot light. Other buildings eligible for exceptions include accessory dwelling units, non-residential buildings constructed to Office of Statewide Health Planning and Development Hospital standards, factories/industrial buildings, high-hazard buildings, and scientific laboratory areas. Implementation of Mitigation Measure CC-1 in Chapter 13, *Climate Change*, requires all future projects in the amended DTPP area to be all-electric (with limited exceptions). This would eliminate much of the direct air pollutant emissions from building energy use. However, inasmuch as up to 30 percent of the office space could be devoted to Research and Development Laboratory uses, there could likely be emissions of criteria air pollutants from non-electric space-conditioning and water-heating system, as well as, potentially, emissions from natural gas in manufacturing, research, and development. However, the precise nature and volume of such emissions, if any, cannot be known at this time and would be evaluated on a project-specific basis as individual project applications were received.

ROG emissions from projects that include a substantial residential component may also potentially exceed the BAAQMD thresholds. ROG emissions from residential uses are primarily generated from the use of consumer products which are chemically formulated products used by household and institutional consumers, including, but not limited to, degreasers, fertilizers/pesticides, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. With transportation-related emissions of ROG decreasing over time owing to stricter controls on air pollution, the relative importance of emissions from consumer products has increased. Studies estimate that consumer products now contribute as much to urban air pollution as tailpipe emissions from vehicles despite the fact that people use a lot more fuel than they use consumer products—about 15 times more by weight.⁴¹

Current methodology for estimating ROG emissions from consumer products uses the most recent version of the California Emissions Estimator Model (CalEEMod 2020.4.0) which relies on the 2008 CARB Consumer Product Emission Inventory.⁴² These emission factors have not been updated recently to reflect low emission products available in the market and are therefore conservative. In addition, consumer product emissions are largely based on personal choices and usage patterns of consumers that the city does not have control over. Hence, there are no effective mitigation measures restricting the use of certain consumer products or limiting the choice. ROG emissions from consumer products is regulated by CARB through the California Consumer

⁴⁰ City of Redwood City, 2020. Ordinance 2487 – An Ordinance of the City of Redwood City Adding Article XV of Chapter 9 of the Redwood City Code to Adopt Local Amendments to 2019 Edition of the California Energy Code and Green Building Standards Codes, Together with Certain Amendments, Exceptions, Modifications and Additions Thereto, September 21, 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23035/637473438954470000>, accessed February 3, 2022.

⁴¹ Fell, Andy, 2018. Consumer, Industrial Products Overtake Transportation as Source of Urban Air Pollution, February 15, 2018. Available online: <https://www.ucdavis.edu/news/consumer-industrial-products-overtake-transportation-source-urban-air-pollution>, accessed April 7, 2022.

⁴² CARB, 2009. *Almanac Emission Projection Data by EIC – Statewide Solvent Evaporation (510-Consumer Products)*, 2009. Available online: https://www.arb.ca.gov/app/emsinv/emseic_query.php?F_YR=2008&F_DIV=-4&F_SEASON=A&SP=2009&SPN=2009_Almanac&F_AREA=CA&F_EICSUM=510, accessed April 7, 2022.

Products Regulations (Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5).

Based on the potential for NO_x, PM, and ROG emissions from development projects allowed by the DTPP Plan-Wide Amendments to exceed significance thresholds, operational emissions of criteria pollutants are considered *potentially significant*.

Mitigation Measure AQ-2a, below, would ensure implementation of best management practices consistent with BAAQMD recommendations to reduce fugitive dust emissions during construction to less than significant levels. Implementation of new Mitigation Measure AQ-2b would require a quantitative analysis of projects exceeding the BAAQMD's screening criteria for criterial pollutant emissions, and specifies emission reduction measures that shall be implemented if significance thresholds for criteria pollutants are exceeded.

Mitigation Measure AQ-2a: Best Management Practices for Construction Dust Suppression.

All subsequent projects, regardless of size, shall implement best management practices to reduce construction impacts, particularly fugitive dust, to a less-than-significant level.

Specifically, the project applicant shall require all construction plans to specify implementation of the following best management practices:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 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 mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

Mitigation Measure AQ-2b: Emission Reduction Measures for Projects Exceeding the Significance Thresholds for Criteria Pollutants.

Project applicants proposing projects that exceed BAAQMD screening levels shall prepare a project-level criteria air pollutant assessment of construction and operational emissions at the time the project is proposed. The project-level assessment shall either include a comparison of the project with other similar projects where a quantitative analysis has been conducted, or shall provide a project-specific criteria air pollutant analysis to determine whether the project exceeds the BAAQMD's criteria air pollutant thresholds identified in Table 12-7.

In the event that a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed BAAQMD significance thresholds, the project applicant shall implement the following emission reduction measures to the degree necessary to reduce the impact to less than the significance thresholds, and shall implement additional feasible measures if necessary to reduce the impact to less than the significance thresholds.

Clean Construction Equipment

1. The project applicant shall use electric construction equipment when feasible.
2. The project applicant shall ensure that all diesel off-road equipment shall have engines that meet the Tier 4 Final off-road emission standards, as certified by CARB, except as provided for in this section. This requirement shall be verified through submittal of an equipment inventory that includes the following information: (1) Type of Equipment, (2) Engine Year and Age, (3) Number of Years Since Rebuild of Engine (if applicable), (4) Type of Fuel Used, (5) Engine HP, (6) Verified Diesel Emission Control Strategy (VDECS) information if applicable and other related equipment data. A Certification Statement is also required to be made by the Contractor for documentation of compliance and for future review by the BAAQMD as necessary. The Certification Statement must state that the Contractor agrees to compliance and acknowledges that a violation of this requirement shall constitute a material breach of contract.

The City may waive the requirement for Tier 4 Final equipment only under the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards is technically not feasible or not commercially available; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use other alternate off-road equipment. For purposes of this mitigation measure, "commercially available" shall mean the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the region occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction for the project and (ii) geographic proximity to the project site of Tier 4 Final equipment.

3. The project applicant shall require the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.

Operational Emission Reductions

1. As required by Mitigation Measure CC-1, all project buildings shall be consistent with the “all electric” requirement in the City’s Reach Codes in effect at the time that a building permit application is filed.
2. As required by Mitigation Measure CC-1, projects shall provide EV charging infrastructure consistent with the City’s Reach Codes or the applicable Tier 2 CALGreen standards in effect at the time that a building permit application is filed, whichever is more restrictive.
3. All newly constructed loading docks on commercial properties that can accommodate trucks with Transport Refrigeration Units (TRUs) shall be equipped with EV charging equipment to power TRUs during loading and unloading at docks. This measure does not apply to temporary street parking for loading or unloading.

Emission Offsets

If a project-specific analysis finds that the project could result in criteria air pollutant emissions that exceed BAAQMD significance thresholds despite implementation of the above emission reduction measures, the project applicant shall pay mitigation offset fees to the BAAQMD’s Bay Area Clean Air Foundation or other governmental entity. The mitigation offset fee shall fund one or more emissions reduction projects within the San Francisco Bay Area Air Basin. The fee will be determined by the City, the project applicant, and the BAAQMD or other governmental entity, and be based on the type of projects available at the time of the payment. The fee is intended to fund emissions reduction projects to achieve annual reductions of ROG, NO_x, and PM₁₀ equal to the amount required to reduce emissions below significance levels after implementation of other emission reduction strategies identified above.

Significance after Mitigation. The BAAQMD has taken a qualitative approach to addressing fugitive dust emissions from construction activities and considers any project that implements the best management practices in Mitigation Measure AQ-2a to not result in a significant impact with respect to fugitive dust. (New significant but mitigable impact, compared to DTPP Final EIR)

Mitigation Measure AQ-2b is expected to be effective at reducing criteria pollutant emissions from construction and operation of individual projects developed in the amended DTPP area to below the BAAQMD thresholds; however, the specific emissions associated with future projects are not currently known, and therefore the effectiveness of emission reduction measures cannot be definitively determined. It is possible that projects with substantial ground disturbance, specialty construction equipment, or compressed and highly intensive construction schedules could exceed construction significance thresholds. Also, ROG emissions from consumer products used during project operations may remain significant because use of such products is a function of consumer choice and commercial availability.

Finally, although the mitigation measure would require emissions offsets required to reduce any criteria pollutant emissions that would exceed the thresholds of significance for these pollutants after implementation of all other feasible emission reduction measures, implementation of any emissions reduction project(s) that may be developed would be undertaken by BAAQMD and is outside the jurisdiction and control of the City and not fully within the control of the project

applicants. For these reasons, criteria air pollutants from construction and operation of subsequent projects developed under the proposed DTPP Plan-Wide Amendments would result in a new and more severe impact than the impact identified in the DTPP Final EIR. This impact would conservatively be ***significant and unavoidable with mitigation***.

The identification of this significant and unavoidable impact does not preclude the finding of a less-than-significant or less-than-significant-with-mitigation impact for subsequent projects that are below the applicable screening criteria or that meet the criteria air pollutant thresholds of significance with implementation of Mitigation Measure AQ-2b.

Health Implications of Significant Impacts Related to Ozone Precursors

The health effects associated with emissions of criteria pollutants and ozone precursors are described in Table 12.1 under Section 12.1, *Environmental Setting* above. The main health concern of exposure to ground-level ozone formed from ROG and NO_x, the ozone precursors, is the effect on the respiratory system, especially on lung function.

As discussed above, individual projects developed under the proposed DTPP Plan-Wide Amendments could generate criteria pollutant emissions ROG, NO_x, and particulate matter during construction and/or operation that exceed the BAAQMD's project-level thresholds. In the absence of project-specific information, it would be speculative to quantify criteria pollutant emissions and these impacts have been assessed qualitatively, resulting in programmatic mitigation measures that would apply to future development projects. Without quantification of criteria pollutant emissions, it is not possible to quantify the health impacts of these emissions on sensitive receptors. There is also currently no guidance or thresholds for a significance determination regarding health effects from criteria pollutant emissions.⁴³

Impact AQ-3: Implementation of the proposed DTPP Plan-Wide Amendments would not expose sensitive receptors to substantial pollutant concentrations. (*Less than Significant with Mitigation*)

DTPP Impact Summary

The DTPP Final EIR analyzed the impact of existing sources of TAC emissions in Redwood City on future receptors that would be introduced to the area by the DTPP. The 2010 General Plan, in its draft form at the time of DTPP CEQA review, included policies and programs that discouraged new development in areas where sensitive receptors could be exposed to significant TAC levels. Because the 2010 draft General Plan was not yet adopted, the impact of the DTPP related to exposure to TACs was concluded as potentially significant with Mitigation Measure 12-1 providing

⁴³ Complex health impact analyses for recent projects that are of comparable scale or larger than the amount of development that could be permitted pursuant to the DTPP Plan-Wide Amendments have found that health impacts of criteria pollutants would be relatively minimal. See, for example, the Final EIRs for the Downtown West Mixed-Use Project in San José (<https://www.sanjoseca.gov/your-government/department-directory/planning-building-code-enforcement/planning-division/environmental-planning/environmental-review/active-eirs/downtown-west-mixed-use-plan/-fsiteid-1>) and the Oakland A's Waterfront Ballpark District Project (<https://www.oaklandca.gov/documents/draft-eir-for-the-oakland-as-waterfront-ballpark-district-project>).

guidance for siting future sensitive receptors with respect to existing sources of pollution to reduce the impact to a less than significant level. Exposure of existing sensitive receptors to TAC emissions generated by construction and operation of the amended DTPP area were not analyzed.

Project Impacts

Since the DTPP Final EIR, the 2010 General Plan has been adopted and Policy PS-2.6 of the Public Safety element includes the same requirements as DTPP Mitigation Measure 12-1.

The BAAQMD 2017 Guidelines recommend analysis of local community risk and hazards of plans by establishing overlay zones around existing and planned sources of TACs (including adopted Risk Reduction Plan areas) and overlay zones of at least 500 feet from all freeways and high volume roadways. These requirements are included in the City's 2010 General Plan as Policies PS-2.4 and PS-2.7 and development pursuant to the proposed DTPP Plan-Wide Amendments would be subject to these policies. As discussed under *Scope of Analysis* above, CEQA no longer requires the analysis of the impact of the environment on the project pursuant to the CBIA decision; therefore, this impact is not analyzed further.

The BAAQMD does not provide any guidance to analyze health risk impacts of plans on the environment. Nonetheless, subsequent projects developed under the proposed DTPP Plan-Wide Amendments would generate TACs, primarily DPM, during construction and operation. DPM emissions would be generated from the combustion of diesel fuel in construction equipment and heavy-duty trucks transporting materials and equipment to and from individual project sites. Based on the land uses proposed as part of the DTPP Plan-Wide Amendments, the likely sources of operational TAC emissions would be any proposed emergency generators (required for residential structures over 75-feet) and truck traffic serving the commercial uses in the amended DTPP area.

Construction Health Risk

As the specific characteristics of each subsequent project under the proposed DTPP Plan-Wide Amendments and the required construction equipment information (year and duration of construction, equipment type, operating hours, horsepower, etc.) are not known, it is not possible to quantify construction-related health risks from exposure to TAC emissions from all projects in the DTPP Plan-Wide Amendments. Depending on the size of the project, phasing, duration and intensity of construction activities, proximity and location of sensitive receptors relative to project sources, type of sensitive receptors in the vicinity, and the meteorology and topography of the area, projects could result in ***potentially significant*** health risk impacts from either building excavation and construction and/or from utility improvements. It is noted, however, that typical utility improvements along relatively short street segment(s) is generally far smaller in scale than that of multi-story building construction. Moreover, off-site utility improvements are typically relatively short in duration (i.e., a few weeks or, at most, two or three months) at any given location, and such off-site improvements would likely affect different receptors than would construction on a specific project site. Accordingly, any required utility improvements would represent a relatively small proportion of any development project's construction health risk, particularly as it would affect any individual receptor.

The DTPP Plan-Wide Amendments would result in new and more severe construction health risk impacts than the impacts identified in the DTPP Final EIR. Implementation of new Mitigation Measure AQ-3 would require a project-specific HRA to be conducted at the time of project review using project-specific information on construction schedule, phasing and equipment use and implementation of measures to reduce risks above the BAAQMD's health risk thresholds to less-than-significant levels.

Operational Health Risk

Operational sources of health risk in the amended DTPP area could include diesel-fueled emergency generators and fire pumps required in taller buildings as part of the emergency power systems and standby power systems requirement of the California Building Code for high-rise buildings with occupied floors located more than 75 feet from the lowest level of fire department vehicle access. Additionally, diesel trucks serving the potential new R&D laboratories and the new office space could generate increased diesel emissions. Finally, R&D Laboratory uses could also emit TACs depending on the nature and chemical makeup of the procedures undertaken.

Installation and operation of fire pumps and emergency diesel generators would require an Authority to Construct and Permit to Operate from the BAAQMD, who would evaluate emissions based on size and require Best Available Control Technology, if warranted. Per its Policy and Procedure Manual, the BAAQMD would deny an Authority to Construct or a Permit to Operate for any new or modified source of TACs that exceeds a cancer risk of 10 in one million or a chronic or acute Hazard Index of 1.0, the BAAQMD's thresholds for health risk impacts. Therefore, health risks associated with emergency generators and fire pumps anticipated as part of the DTPP Plan-Wide Amendments would not result in new or more severe operational health risk impacts than the impacts identified in the DTPP Final EIR. Therefore, operational health risks from emergency generators and fire pumps would be *less than significant*.

With regard to potential TAC emissions from R&D, including life science, laboratory uses, it is not known at this time whether such facilities would be proposed within the DTPP area, nor where they might be located. However, because the proposed DTPP Plan-Wide Amendments would allow up to 30 percent of the new DTPP-area office space to be devoted to R&D Laboratory use, this SEIR assumes that such uses would be developed within the DTPP area in the future and that such uses could be proximate to sensitive receptors. Some projects could also include sensitive receptors, such as childcare facilities, as part of the project. Because details regarding new laboratory space, fume hoods, and specific chemical use in future R&D laboratories are not available at this time, it is therefore conservatively assumed that emissions from R&D laboratories would be *potentially significant*.

Additional development would generate increases in deliveries to the DTPP area that would include diesel-powered trucks. These additional truck trips would increase local DPM emissions that could potentially increase health risks to sensitive receptors along and near truck routes of travel. However, in the absence of project-specific details, the potential changes cannot be quantified. Therefore, Mitigation Measure AQ-3c is identified to ensure that increased DPM concentrations from additional truck deliveries would not result in a significant health risk impact.

Based on the foregoing, anticipated operational sources—diesel generators and fire pumps, R&D laboratories, and diesel trucks—would result in a new significant impact not identified in the DTPP Final EIR because of the potential for R&D, including life science, laboratories to be developed proximate to sensitive receptors. However, with implementation of Mitigation Measures AQ-3b and AQ-3c, this impact would be *less than significant with mitigation*.

Mitigation Measure AQ-3a: Emission Reduction Measures for Subsequent Projects Exceeding the Significance Thresholds for Health Risks from Construction.

Project applicants within the amended DTPP area proposing projects located, or proposed to be located within 1,000 feet of existing or approved sensitive receptor(s), as defined by the City, including those projects that would include sensitive receptor(s), shall prepare a project-level HRA of construction impacts at the time the project is proposed. This includes projects whose off-site utility improvements would occur over more than six months in duration at any given location that would be within 1,000 feet of existing or approved sensitive receptor(s). The HRA shall be based on project-specific construction schedule, equipment and activity data and shall be conducted using methods and models approved by the BAAQMD, CARB, OEHHA and U.S. EPA. Estimated project-level health risks shall be compared to the BAAQMD’s health risk significance thresholds for projects.

In the event that a project-specific HRA finds that the project could result in significant construction health risks that exceed BAAQMD significance thresholds, the project applicant shall implement Mitigation Measure AQ-2b’s requirement for the use of all Tier 4 Final construction equipment to reduce project-level health risks to a less than significant level. In addition, all tower cranes and man- and material-lifts shall be electric powered and forklifts shall be electric- or LNG-powered.

Mitigation Measure AQ-3b: Laboratory Emission Controls.

For any individual project that contains emissions-generating laboratory space within a “Research and Development, Laboratory” use, as defined in the Redwood City Municipal Code and located, or proposed to be located, within 1,000 feet of existing or approved sensitive receptor(s), as defined by the City, including those projects that would include sensitive receptor(s), the project applicant shall undertake the following:

- Conduct a health risk screening analysis and obtain a permit from BAAQMD for the proposed individual projects; this permit may be required either prior to or as a condition of approval of the proposed individual project. In accordance with BAAQMD Rules 2-1 and 2-5, new sources of emissions must implement Best Available Control Technology for Toxics (T-BACT) if individual source risks exceed 1.0 in a million for cancer and/or chronic hazard index is greater than 0.20. Additionally, a permit will be denied if project cancer risk exceeds 10.0 in a million or if the chronic or acute hazard index exceeds 1.0; and
- Obtain a conditional use permit from the City of Redwood City, subject to conditions such as the City may impose. Such conditions may include, but not necessarily be limited to, limitations on the materials and/or quantities of materials to be handled and/or stored on-site; implementation of emissions controls that, at a minimum, meet the BAAQMD T-BACT standard; siting constraints for laboratory uses and/or fume hoods; controls ensuring security of laboratory facilities and materials handled and stored therein; and limitations on the number of deliveries and/or the times when deliveries would be permitted.

Mitigation Measure AQ-3c: Design for Diesel Delivery Truck Emissions Minimization.

The project applicant for any subsequent development project that includes off-street loading facilities shall incorporate the following health risk reduction measures into the project design and construction contracts (as applicable) in order to reduce the potential health risk due to exposure to toxic air contaminant emissions from diesel trucks:

1. Install electrical hook-ups for diesel trucks Transportation Refrigeration Units (TRU) at off-street loading docks.
2. Require trucks using off-street loading facilities to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
3. Require truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels for trucks using off-street loading facilities.
4. Prohibit trucks using off-street loading facilities from idling for more than two minutes to the extent feasible.
5. Establish truck routes to avoid sensitive receptors to the extent feasible. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

Significance after Mitigation: Mitigation Measure AQ-3 would require subsequent projects within 1,000 feet of existing or approved sensitive receptors to undergo a project-level HRA at the time the project is proposed and to utilize the clean construction equipment required by Mitigation Measure AQ-2b if the project-specific health risk thresholds are exceeded. Implementation of Mitigation Measure AQ-3a would reduce construction health risk impacts to *less than significant with mitigation* by use of clean construction equipment that meet the Tier 4 Final off-road emission standards, or equivalent VDECS, as certified by CARB, while implementation of Mitigation Measures AQ-3b and AQ-3c would reduce operational health risk impacts to *less than significant with mitigation* by requiring health risk assessments for laboratory emissions and reducing diesel truck loading emissions. This would be a new significant but mitigable impact, compared to DTPP Final EIR.

Impact AQ-4: Adoption of the DTPP Plan-Wide Amendments would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant*)

DTPP Impact Summary

The DTPP Final EIR concluded that development facilitated by the DTPP could result in food service uses (e.g., restaurants) in close proximity or in the same building as residential or other odor-sensitive uses, which could, if not properly mitigated, result in a potentially significant impact. The DTPP Final EIR identified Mitigation Measure 12-2 requiring future food service establishments to implement odor control measures to the City's satisfaction and found that the impact would be reduced to a less than significant level with mitigation.

Project Impacts

The use of construction equipment at future construction sites in the amended DTPP area could potentially create objectionable odors that may affect receptors in the immediate vicinity. Construction-related odors would be localized and temporary, and the use of low-VOC surface coating materials in accordance with BAAQMD Rules would reduce potentially objectionable odors from painting operations.

Land uses allowed by the DTPP Plan-Wide Amendments would not include any major sources of odor, although certain commercial land uses, for example, restaurants, emit cooking odors while in operation that may be deemed objectionable. This includes odors associated with any char broilers. DTPP Final EIR Mitigation Measure 12-2 required projects to implement some or all of the following measures to the City's satisfaction: integral grease filtration or grease removal systems, baffle filters, electrostatic precipitators, water cooling/cleaning units, disposable pleated or bag filters, activated carbon filters, oxidizing pellet beds, catalytic conversion, proper packaging and frequency of food waste disposal, and exhaust stack and vent location with respect to receptors. However, these requirements are enforced through compliance with BAAQMD Rule 6-2 (Commercial Cooking Equipment) making Mitigation Measure 12-2 redundant and hence not necessary.

Land uses proposed as part of the DTPP Plan-Wide Amendments are not expected to generate odors that would adversely affect a substantial number of people and would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. The impact would be *less than significant* and no mitigation measures would be required.

Mitigation: None required.

12.4 References

- Bay Area Air Quality Management District (BAAQMD), 2011. *Recommended Methods for Screening and Modeling Local Risks and Hazards*, May 2011. Available online: https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/baaqmd-modeling-approach.pdf, accessed February 2, 2022.
- BAAQMD, 2016a. BAAQMD *Air Toxics NSR Program Health Risk Assessment Guidelines*, December 2016. Available online: https://www.baaqmd.gov/~/_media/files/planning-and-research/permit-modeling/hra_guidelines_12_7_2016_clean-pdf.pdf?la=en, accessed September 15, 2021.
- BAAQMD, 2016b. Planning Healthy Places. Interactive Map of the Bay Area Showing Areas with Estimated Elevated Levels of Fine *and/or Toxic Air Contaminants*, posted May 20, 2016. Available online: <https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=51c2d0bc59244013ad9d52b8c35cbf66>, accessed February 3, 2022.

- BAAQMD, 2017a. *Air Quality Standards and Attainment Status*, last updated January 5, 2017. Available online: <https://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status>, accessed February 2, 2022.
- BAAQMD, 2017b. California Environmental Quality Act, Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed February 2, 2022.
- BAAQMD, 2017c. Final 2017 Clean Air Plan – Spare the Air, Cool the Climate, April 19, 2017. Available online: https://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 February 3, 2022.
- BAAQMD, 2021a. *2020 Air Monitoring Network Plan*, July 1, 2021. Available online: <https://www.baaqmd.gov/~media/files/technical-services/2020-network-plan-draft-202100526-pdf.pdf?la=en>, accessed February 2, 2022.
- BAAQMD, 2021b. Revised BACT Guideline for Diesel backup Generators > 1000 BHP, Frequently Asked Questions, March 17, 2021. Available online: https://www.baaqmd.gov/~media/files/engineering/backup-diesel-generators/faq_bact_for_large_diesel-pdf.pdf?la=en, accessed February 3, 2022.
- BAAQMD, 2022. Monthly Air Quality Index for South Central Bay. Available online: <https://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data/#/aqi-highs?date=2021-12-02&view=monthly>, accessed February 21, 2022.
- California Air Resources Board (CARB), 1998. *Fact Sheet: The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines*, October 1998. Available online: <https://ww2.arb.ca.gov/sites/default/files/classic/toxics/dieseltac/factsht1.pdf>, accessed September 15, 2021.
- CARB, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005. Available online: <https://ww3.arb.ca.gov/ch/handbook.pdf>, accessed September 15, 2021.
- CARB, 2009. *Almanac Emission Projection Data by EIC – Statewide Solvent Evaporation (510-Consumer Products)*, 2009. Available online: https://www.arb.ca.gov/app/emsinv/emseic_query.php?F_YR=2008&F_DIV=-4&F_SEASON=A&SP=2009&SPN=2009_Almanac&F_AREA=CA&F_EICSUM=510, accessed April 7, 2022.
- CARB, 2022a. California Ambient Air Quality Standards (CAAQS). Available online: <https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards>, accessed February 2, 2022.
- CARB, 2022b. Common Air Pollutants. Available online: <https://ww2.arb.ca.gov/resources/common-air-pollutants>, accessed February 2, 2022.
- CARB, 2022c. Sources of Air Pollution. Available online: <https://ww2.arb.ca.gov/resources/sources-air-pollution>, accessed February 2, 2022.

- CARB, 2022d. iADAM Air Quality Data Statistics – Top 4 Summary. Available online: <https://www.arb.ca.gov/adam/topfour/topfour1.php>, accessed February 2, 2022.
- CARB, 2022e. In-Use Off-Road Diesel-Fueled Fleets Regulation. Available at <https://ww2.arb.ca.gov/our-work/programs/use-road-diesel-fueled-fleets-regulation>, accessed February 3, 2022.
- California Building Standards Commission (CBSC). 2019. *Guide to the 2016 California Green Building Standards Code Nonresidential*. November 2019. Available online: <https://cdn-codes-pdf.iccsafe.org/uploads/bookpdfs/Guide%20to%202019%20CALGreen%20Build%20Stand%20NonRes.pdf>. Accessed January 27, 2022.
- California Energy Commission. 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, December 2018. Available online: https://www.energy.ca.gov/sites/default/files/2021-06/CEC-400-2018-020-CMF_0.pdf. Accessed January 30, 2022.
- CEC. 2022. 2022 Building Energy Efficiency Standards, 2022. Available online: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed January 30 2022.
- California Housing and Community Development. n.d. 2022 CALGreen, no date. Available online: <https://catc.ca.gov/-/media/ctc-media/documents/ctc-meetings/2021/2021-04/tab-2-hcd-pres-a11y.pdf>. Accessed January 30, 2022.
- CALFIRE, 2022. Stats and Events. Available online: <https://www.fire.ca.gov/stats-events/>, accessed February 3, 2022.
- CalMatters, 2021. New Study: California’s Trailblazing Diesel Rules Save Lives, March 26, 2021. Available online: <https://calmatters.org/environment/2021/03/california-diesel-rules>, accessed February 2, 2022.
- City of Redwood City, 2010. Redwood City General Plan – Public Safety Element, October 11, 2010. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/5109/635782756603530000>, accessed February 3, 2022.
- City of Redwood City, 2020a. Climate Action Plan, November 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>, accessed on February 3, 2022.
- City of Redwood City, 2020b. Ordinance 2487 – An Ordinance of the City of Redwood City Adding Article XV of Chapter 9 of the Redwood City Code to Adopt Local Amendments to 2019 Edition of the California Energy Code and Green Building Standards Codes, Together with Certain Amendments, Exceptions, Modifications and Additions Thereto, September 21, 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23035/637473438954470000>, accessed February 3, 2022.
- Fell, Andy, 2018. Consumer, Industrial Products Overtake Transportation as Source of Urban Air Pollution, February 15, 2018. Available online: <https://www.ucdavis.edu/news/consumer-industrial-products-overtake-transportation-source-urban-air-pollution>, accessed April 7, 2022.

Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2013. Bay Area Plan – Strategy for A Sustainable Region, July 13, 2013. Available online: http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/Plan_Bay_Area.pdf. Accessed on January 30, 2022.

MTC & ABAG. 2017. Plan Bay Area 2040. Adopted July 26, 2017. Available online: https://mtc.ca.gov/sites/default/files/Final_Plan_Bay_Area_2040.pdf. Accessed January 27, 2022.

MTC & ABAG. 2021. Plan Bay Area 2050, Adopted October 21, 2021. Available online: https://planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed January 28, 2022.

MTC, 2022. Priority Development Areas (Plan Bay Area 2050). Available online: <https://opendata.mtc.ca.gov/datasets/priority-development-areas-plan-bay-area-2050/explore?location=37.476065%2C-122.151715%2C12.06>. Accessed February 15, 2022.

Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments, February 2015. Available Online: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed February 10, 2022.

San Joaquin Valley Air Pollution Control District (SJVAPCD), 2014. *Application for Leave to File Brief of Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

South Coast Air Quality Management District (SCAQMD), 2014. *Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Party and Brief of Amicus Curiae. In the Supreme Court of California. Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, 2014.

Pollution Engineering, 2006. *New Clean Diesel Fuel Rules Start*, July 2, 2006, Available online: https://sj-admin.s3-us-west-2.amazonaws.com/2006_0700-PollutionEngineering_NewCleanDiesel.pdf, accessed February 2, 2022.

CHAPTER 13

Climate Change

This SEIR chapter analyzes the effects to climate change (i.e., greenhouse gas emissions, energy consumption/efficiency, and sea-level rise) that would result from implementation of the proposed DTPP Plan-Wide Amendments, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

The DTPP Final EIR identified a less than significant impact with respect to generation of greenhouse gas (GHG) emissions that could have a significant impact on the environment. The analysis found that GHG emissions generated by the DTPP would be less than the emissions per service population threshold recommended by the BAAQMD at the time. No significant impact was identified and hence, no mitigation required.

The DTPP Final EIR identified a potentially significant impact with respect to sea level rise associated with the effect of increased GHG emissions on global climate change. Mitigation Measure 13-1 was identified requiring preparation of response strategies that address sea level rise and increased flooding. The DTPP Final EIR further concluded that, given the uncertainty surrounding climate change, Mitigation Measure 13-1 would not reduce this potential impact to a less-than-significant level and the impacts related to flooding caused by sea level rise would remain significant and unavoidable.

The DTPP Final EIR did not analyze impacts related to energy use and conservation as significance criteria for energy use were introduced to Appendix G of the CEQA Guidelines in 2018.

13.1 Environmental Setting

13.1.1 Climate Science

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century. Natural processes and human actions have been identified as affecting the climate. The Intergovernmental Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward.

However, increasing GHG concentrations resulting from human activity since the 19th century, such as fossil fuel combustion, deforestation, and other activities, are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space—a phenomenon referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the Earth’s surface habitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected into space, intensifying the natural greenhouse effect, and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO₂, methane, and nitrous oxide occur naturally and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane results from off-gassing, natural gas leaks from pipelines and industrial processes, and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. Nitrous oxide emissions are also largely attributable to agricultural practices and soil management. CO₂ sinks include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution, and are two of the largest reservoirs of CO₂ sequestration. Other human-generated GHGs include fluorinated gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, which have much higher heat-absorption potential than CO₂ and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, methane and nitrous oxide are substantially more potent GHGs than CO₂, with GWPs of 25 and 298 times that of CO₂ respectively, which has a GWP of 1 (CARB, 2022).

In emissions inventories, GHG emissions are typically reported as metric tons of CO₂ equivalent (MTCO₂e). CO₂e is calculated as the product of the mass emissions of a given GHG and its specific GWP. While methane and nitrous oxide have much higher GWPs than CO₂, CO₂ is emitted in higher quantities and it accounts for the majority of GHG emissions in CO₂e, both from commercial developments and human activity in general.

13.1.2 Effects of Global Climate Change

The scientific community’s understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of and inability to accurately model the Earth’s

climate system, the uncertainty surrounding climate change may never be eliminated completely. Nonetheless, the IPCC's AR5 states that is extremely likely that the dominant cause of the observed warming since the mid-20th century is the anthropogenic increase in GHG concentrations (IPCC, 2014). The National Academies of Science from 80 countries have issued statements endorsing the consensus position that humans are the dominant cause for global warming since the mid-20th century.¹

The Fourth California Climate Change Assessment (Fourth Assessment), published in 2018, found that the potential impacts in California due to global climate change include: loss in snow pack; sea-level rise; more extreme heat days per year; more high ozone days; more extreme forest fires; more severe droughts punctuated by extreme precipitation events; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.² The Fourth Assessment's findings are consistent with climate change studies published by the CNRA since 2009, starting with the *California Climate Adaptation Strategy*³ as a response to the Governor's Executive Order S-13-2008. In 2014, the CNRA rebranded the first update of the 2009 adaptation strategy as the *Safeguarding California Plan*.⁴ The 2018 update to *Safeguarding California Plan* identifies hundreds of ongoing actions and next steps state agencies are taking to safeguard Californians from climate impacts within a framework of 81 policy principles and recommendations.⁵

In 2016, the CNRA released *Safeguarding California: Implementation Action Plans* in accordance with Executive Order B-30-15, identifying a lead agency to lead adaptation efforts in each sector.⁶ In accordance with the 2009 *California Climate Adaptation Strategy*, the CEC was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers. The website, known as Cal-Adapt, became operational in 2011. The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios comprised of local average values for temperature, sea-level rise, snowpack and other data representative of a variety of models and scenarios, including potential social and economic

-
- ¹ Cook et al. 2016. Consensus on consensus: a synthesis of consensus estimates on human-caused global warming, *Environmental Research Letters* Vol. 11 No. 4, DOI:10.1088/1748-9326/11/4/048002, April 13, 2016. Available online: <https://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002/pdf>. Accessed January 30, 2022.
 - ² Governor's Office of Planning and Research, California Energy Commission, California Natural Resources Agency. 2018. California's Fourth Climate Change Assessment: Statewide Summary Report, August 2018. Available online: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf. Accessed January 30, 2022.
 - ³ California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy – A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009. Available online: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed January 30, 2022.
 - ⁴ CNRA. 2014. Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy, July 2014. Available online: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf. Accessed January 30, 2022.
 - ⁵ CNRA. 2018. *Safeguarding California Plan: 2018 Update*, January 2018. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed January 30, 2022.
 - ⁶ CNRA. 2016. *Safeguarding California: Implementation Action Plans*, March 2016. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf>. Accessed January 30, 2022.

factors. Below is a summary of some of the potential effects that could be experienced in California as a result of global warming and climate change.

Temperature Increase

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. The impact of human activities on global temperature is readily apparent in the observational record. Since 1895, the contiguous US has observed an average temperature increase of 1.5°F per century.⁷ The 5-year period from 2014–2018 was the warmest on record for the contiguous U.S.⁸; of the top 10 hottest years on record in the U.S., seven have occurred since the year 2000, with the top six years all occurring since 2012.⁹ The Fourth Assessment indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions.¹⁰ According to the Cal-Adapt website, the portion of the state in which the amended DTPP area is located could result in an increase in annual average maximum temperature of approximately 4.6° to 7.4°F by 2070–2090, compared to the baseline period of 1961–1990.^{11,12}

With climate change, extreme heat conditions and heat waves are predicted to impact larger areas, last longer, and have higher temperatures. Heat waves, defined as three or more days with temperatures above 90°F, are projected to occur more frequently by the end of the century. Extreme heat days and heat waves can negatively impact human health. Heat-related illnesses include a spectrum of illnesses ranging from heat cramps to severe heat exhaustion and life-threatening heat stroke.¹³

Wildfires

The hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. The Fourth Assessment found that if GHG emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by

⁷ National Oceanic and Atmospheric Association (NOAA). 2019. Assessing the US Climate in 2018, published February 6, 2019. Available online: <https://www.ncei.noaa.gov/news/national-climate-201812>. Accessed January 30, 2022.

⁸ NOAA. 2019. Assessing the US Climate in 2018, published February 6, 2019. Available online: <https://www.ncei.noaa.gov/news/national-climate-201812>. Accessed January 30, 2022.

⁹ Climate Central. 2022. U.S. Temperatures and Billion-Dollar Disasters, January 10, 2022. Available online: <https://medialibrary.climatecentral.org/resources/us-temps-billion-dollar-disasters>. Accessed January 30, 2022.

¹⁰ Governor’s Office of Planning and Research, California Energy Commission, California Natural Resources Agency. 2018. California’s Fourth Climate Change Assessment: Statewide Summary Report, August 2018. Available online: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf. Accessed January 30, 2022.

¹¹ Cal Adapt, 2022. Annual Average. Available online: <https://cal-adapt.org/tools/annual-averages>. Accessed February 23, 2022.

¹² This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

¹³ Red Cross Red Crescent Climate Centre. 2019. Heatwave Guide for Cities, July 2019. Available online: <https://www.climatecentre.org/downloads/files/IFRCGeneva/RCCC%20Heatwave%20Guide%202019%20A4%20RR%20ONLINE%20copy.pdf>. Accessed January 30, 2022.

nearly 50 percent, and the average area burned statewide each year would increase by 77 percent, by the year 2100. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease.¹⁴

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California and make it more difficult for the state to achieve air quality standards. Climate change may increase the concentration of ground-level ozone, which can cause breathing problems, aggravate lung diseases such as asthma, emphysema, chronic bronchitis, and cause chronic obstructive pulmonary disease, but the magnitude of the effect, and therefore, its indirect effects, are uncertain. Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds.¹⁵ Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.¹⁶

Precipitation and Water Supply

There is a high degree of uncertainty with respect to the overall impact of global climate change on future water supplies in California. Studies indicate considerable variability in predicting precise impacts of climate change on California's hydrology and water resources. Increasing uncertainty in the timing and intensity of precipitation will challenge the operational flexibility of California's water management systems. Warmer and wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.¹⁷

Hydrology and Sea-Level Rise

As discussed above, climate changes could potentially affect: the amount of snowfall, rainfall and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea-level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. Sea-level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm and melting of ice over

¹⁴ Westerling, Anthony LeRoy. 2018. Wildfire Simulations for the Fourth California Climate Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate, Publication no. CCCA4-CEC-2018-014, August 2018. Available online: https://www.energy.ca.gov/sites/default/files/2019-11/Projections_CCCA4-CEC-2018-014_ADA.pdf. Accessed January 30, 2022.

¹⁵ NOAA. 2022. NOAA Wildfires/ FIREX Fact Sheet – The Impact of Wildfires on Climate and Air Quality, no date. Available online: <https://csl.noaa.gov/factsheets/csdWildfiresFIREX.pdf>. Accessed January 30, 2022.

¹⁶ Red Cross Red Crescent Climate Centre. 2019. Heatwave Guide for Cities, July 2019. Available online: <https://www.climatecentre.org/downloads/files/IFRCGeneva/RCCC%20Heatwave%20Guide%202019%20A4%20RR%20ONLINE%20copy.pdf>. Accessed January 30, 2022.

¹⁷ CNRA. 2018. *Safeguarding California Plan: 2018 Update*, January 2018. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed January 30, 2022.

land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California’s water supply. Sea level has risen eight to nine inches (21–24 centimeters) since 1880. In 2020, global sea level set a new record high of 91.3 mm (3.6 inches) above 1993 levels. The rate of sea level rise is accelerating; it has more than doubled from 0.06 inches (1.4 millimeters) per year throughout most of the twentieth century to 0.14 inches (3.6 millimeters) per year from 2006–2015. In many locations along the U.S. coastline, high-tide flooding is now 300 percent to more than 900 percent more frequent than it was 50 years ago. Sea level could rise as much as 8.2 feet (2.5 meters) above 2000 levels by 2100.¹⁸ Rising seas could impact transportation infrastructure, utilities, and regional industries.

The San Francisco Bay Area is one of the top hotspots for sea-level rise in the nation. The economic value of San Mateo County property at risk from sea-level rise exceeds that of any other county in the Bay Area. The assessed value of parcels in Redwood City exposed to near-term (present-day) flooding exceeds \$1 billion, and the assessed value of parcels exposed to erosion and flooding in the long term (50 to 100 years) totals roughly \$39.1 billion. When population projections are taken into account, San Mateo County is one of six counties with more than 100,000 people in the nation (and the only one on the West Coast) that will be affected by three feet of sea-level rise.¹⁹

Agriculture

California has a massive agricultural industry that represents over 13 percent of total U.S. agricultural revenue.²⁰ Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, a changing climate presents significant risks to agriculture due to changes in maximum and minimum temperatures, reduction of winter chill hours, extreme heat leading to additional costs for livestock cooling and losses in production, and declines in water quality, groundwater security, soil health, and pollinator species, and increased pest pressures.²¹

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increased concentrations of GHGs are likely to accelerate the rate of climate change. As stated in the *Safeguarding California Plan*, “species and ecosystems in California are valued both for their intrinsic worth and for the services they provide to society. Air purification, water filtration, flood attenuation, food provision, recreational opportunities such as fishing, hunting, wildlife viewing, and more are all services provided by

¹⁸ NOAA. 2021. Climate Change: Global Sea Level, Last updated December 21, 2021. Available online: <https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level>. Accessed January 30, 2022.

¹⁹ City of Redwood City. 2020. Climate Action Plan. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>. Accessed February 23, 2022.

²⁰ California Department of Food and Agriculture (CDFA). 2020. California Agricultural Statistics Review, 2020. Available online: https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf. Accessed January 30, 2022.

²¹ CNRA. 2018. *Safeguarding California Plan: 2018 Update*, January 2018. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed January 30, 2022.

ecosystems. These services can only be maintained if ecosystems are healthy and robust, and continue to function properly under the impacts of climate change. A recent study examined the vulnerability of all vegetation communities statewide in California and found that 16 of 29 were highly or nearly highly vulnerable to climate change, including Western North American freshwater marsh, Rocky Mountain subalpine and high montane conifer forest, North American Pacific coastal salt marsh, and more.” Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. With climate change, ecosystems and wildlife will be challenged by the spread of invasive species, barriers to species migration or movement in response to changing climatic conditions, direct impacts to species health, and mismatches in timing between seasonal life-cycle events such as species migration and food availability.²²

13.1.3 GHG Emissions Inventories

U.S. GHG Emissions

In 2019, the United States emitted about 6,558 million metric tons of CO₂e (MMTCO₂e), with 76 percent of those emissions coming from fossil fuel combustion for electricity, heat and transportation. Of the major sectors nationwide, transportation accounts for the highest volume of GHG emissions (approximately 29 percent), followed by electricity (25 percent), industry (23 percent), commercial and residential (13 percent), and agriculture (10 percent). Between 1990 and 2019, total U.S. GHG emissions have increased by 1.8 percent, but emissions have generally decreased since peaking in 2007.²³

State of California GHG Emissions

The California Air Resources Board (CARB) compiles GHG inventories for the state. Based on the 2019 GHG inventory data (i.e., the latest year for which data are available from CARB), emissions from GHG emitting activities statewide were 418.1 MMTCO₂e.²⁴ Between 1990 and 2021, the population of California grew by approximately 10 million from 29.6 to 39.5 million.²⁵ This represents an increase of approximately 34 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from \$773 billion in 1990 to \$3.14 trillion in 2019, representing an increase of approximately 306 percent (more than three times the 1990 gross state product) in today’s dollars.²⁶

²² CNRA. 2018. *Safeguarding California Plan: 2018 Update*, January 2018. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed January 30, 2022.

²³ United States Energy Information Administration (USEIA). 2021. *California State Profile and Energy Estimates – Profile Analysis*, last updated February 18, 2021. Available online: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed January 27, 2022.

²⁴ CARB. 2021. *California Greenhouse Gas Emissions for 2000–2019 – Trends of Emissions and Other Indicators*, July 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ca_ghg_inventory_trends_2000-2019.pdf. Accessed January 30, 2022.

²⁵ California Department of Finance. 2022. *E-4 Historical Population Estimates for Cities, Counties, 2022*. Available online: <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/>. Accessed January 30, 2022.

²⁶ California Department of Finance. 2022. *Gross State Product, 2022*. Available online: https://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/. Accessed January 30, 2022.

Despite the population and economic growth, CARB’s 2019 statewide inventory indicated that California’s net GHG emissions in 2019 were 13 MMTCO₂e below 1990 levels, which is the 2020 GHG reduction target codified in California Health and Safety Code Division 25.5, also known as the Global Warming Solutions Act of 2006 (Assembly Bill [AB] 32). **Table 13-1** identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2019. As shown in the table, the transportation sector is the largest contributor to statewide GHG emissions at approximately 39.7 percent in 2019.

TABLE 13-1
STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS

Category	Total 1990 Emissions using IPCC SAR (MMTCO ₂ e)	Percent of Total 1990 Emissions ^e SAR/AR4	Total 2019 Emissions using IPCC AR4 (MMTCO ₂ e)	Percent of Total 2019 Emissions
Transportation	150.7	35%/35%	166.1	39.7%
Electric Power	110.6	26%/26%	58.8	14.1%
Commercial & Residential Fuel Use	44.1	10%/10%	43.8	10.5%
Industrial	103.0	24%/24%	88.2	21.1%
Recycling and Waste ^a	–	–	8.9	2.1%
High GWP/Non-Specified ^b	1.3	<1%/<1%	20.6	4.9%
Agriculture/Forestry	23.6	6%/5%	31.8	7.6%
Forestry Sinks	-6.7		-- ^c	--
Net Total (IPCC SAR)	426.6	100%^e	--	--
Net Total (IPCC AR4)^d	431	100%	418.2	100%

NOTES: IPCC = Intergovernmental Panel on Climate Change; SAR = Second Assessment Report; AR4 = Fourth Assessment Report.

^a Included in other categories for the 1990 emissions inventory.

^b High global warming potential (GWP) gases are not specifically called out in the 1990 emissions inventory.

^c Revised methodology under development (not reported for 2019).

^d CARB revised the State’s 1990 level GHG emissions using GWPs from the IPCC AR4.

^e Values may not total to 100% due to rounding

SOURCES: California Air Resources Board (CARB). 2007. California Greenhouse Gas Inventory - By IPCC Category, last updated November 19, 2007. Available online: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ghg_inventory_ipcc_all_90-04_AR4.pdf. Accessed January 30, 2022.

CARB. 2021a. California Greenhouse Gas Emissions for 2000–2019 – Trends of Emissions and Other Indicators, July 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ca_ghg_inventory_trends_2000-2019.pdf. Accessed January 30, 2022.

13.1.4 Bay Area GHG Emissions

Based on 2015 data, in the nine-county San Francisco Bay Area, GHG emissions from the transportation sector represented the largest source of GHG emissions at 41 percent, followed by the stationary industrial sources at 26 percent, electricity generation and co-generation at 14 percent, and fuel use (primarily natural gas) by buildings at 10 percent. The remaining 8 percent of emissions is composed of fluorinated gas emissions and emissions from solid waste and agriculture. According to the Bay Area Air Quality Management District (BAAQMD), of the

total transportation emissions in 2015, on-road sources accounted for approximately 87 percent, while off-road sources accounted for the remainder.²⁷

13.1.5 City of Redwood City GHG Emissions

Redwood City's first generation-based GHG inventory was completed for 2005 (the baseline year). Beginning in 2010, new community GHG inventories have been completed annually, enabling Redwood City to track progress over time. In 2017, Redwood City emitted an estimated 494,944 MTCO₂e from the residential, commercial, industrial, transportation, waste, and municipal sectors. In comparison to the base year of 2005, that is a 22.7 percent decrease in total community emissions.²⁸ The two largest categories of emissions are transportation (including highway travel, local travel, and off-road equipment) and building energy use (including residential and commercial/ industrial). The residential and commercial/industrial sectors represent emissions that result from electricity and natural gas used in both private and public sector buildings and facilities. The transportation sector includes emissions from private, commercial, and fleet vehicles driven within the City's geographical boundaries, as well as the emissions from public transit vehicles and the City-owned fleet. **Table 13-2** provides sector-by-sector summary of 2017 community-wide GHG emissions in Redwood City.

TABLE 13-2
REDWOOD CITY 2017 GHG EMISSIONS BY SECTOR

Sector	MTCO ₂ e
Residential Energy	68,032
Commercial/Industrial Energy	132,994
Transportation	279,087
Solid Waste	11,924
Water & Wastewater	2,908
Total	494,944

NOTE: MTCO₂e = metric tons of carbon dioxide equivalent

SOURCE: City of Redwood City. Climate Action Plan. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>. Accessed February 23, 2022.

13.1.6 State Energy Profile

In 2019, total energy usage in California was 7,802 trillion British thermal units (Btu) (the most recent year for which these data are available), which equates to an average of 198 million Btu per capita per year. These figures place California second among the 50 states in total energy use and 50th in per-capita consumption. Of California's total energy usage, the breakdown by sector is roughly 39.4 percent transportation, 23.1 percent industrial, 18.8 percent commercial, and

²⁷ Bay Area Air Quality Management District (BAAQMD). 2017a. 2017 Final Clean Air Plan, April 19, 2017. Available online: https://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 January 30, 2022.

²⁸ City of Redwood City. 2020a. Climate Action Plan. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>. Accessed February 23, 2022.

18.7 percent residential. Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum-based fuel consumption is generally accounted for by transportation-related energy use.²⁹

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, coal, and nuclear gas generation resources. Approximately 70 percent of the electrical power needed to meet California’s demand is produced in the state; the balance, approximately 30 percent, is imported from the Pacific Northwest and the Southwest. In 2020, California’s in-state electricity use was derived from natural gas (48 percent); coal (< 1 percent); large hydroelectric resources (9 percent); nuclear sources (9 percent); renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (33 percent).³⁰

13.1.7 Regional Setting

Electricity

Electricity, as a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of resources—including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources—into useable energy. The delivery of electricity involves several system components for distribution and use. Electricity is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W), while energy use is measured in watt-hours. For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for one hour would be 100 watt-hours. If ten 100 W bulbs were on for one hour, the energy required would be 1,000 watt-hours or 1 kilowatt-hour (kWh). On a utility scale, the capacity of a generator is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours, which is one billion watt-hours.

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas services to approximately 16 million people throughout its 70,000-square-mile service area in northern and central California, from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east.³¹ PG&E produces and purchases energy from a mix of conventional and renewable generating sources. Approximately 31 percent of PG&E’s 2020 electricity purchases were from renewable sources.³² **Table 13-3** provides a summary of electricity use in the state and PG&E service area.

²⁹ USEIA. 2022. California State Profile and Energy Estimates. Last updated January 20, 2022. Available online: <https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures>. Accessed January 27, 2022.

³⁰ CEC. 2022. 2020 Total System Electric Generation. Available online: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>. Accessed on January 27, 2022.

³¹ Pacific Gas and Electric Company (PG&E). 2022. Company Profile. Available online: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed January 27, 2022.

³² PG&E. 2022. PG&E 2020 Power Content label. Available online: <https://www.energy.ca.gov/filebrowser/download/3882>. Accessed on January 27, 2022.

**TABLE 13-3
EXISTING ANNUAL STATE AND REGIONAL ENERGY USE**

Source	Amount
Electricity (State/PG&E service area) ^a	279,510 GWh / 78,519 GWh
Natural Gas (State/PG&E service area) ^a	1,232,858,394 MMBtu / 450,746,500 MMBtu
Gasoline (Statewide/San Mateo County) ^b	12,572 million gallons / 238 million gallons
Diesel (Statewide/San Mateo County) ^b	4,254 million gallons / 27 million gallons

NOTES: MMBtu = million British thermal units; MWh = megawatt-hours; PG&E = Pacific Gas and Electric Company.

SOURCES:

^a California Energy Commission (CEC). 2022. California Energy Consumption Database. Available online: <https://ecdms.energy.ca.gov/>. Accessed January 27, 2022.

^b CEC. 2020. 2020 California Annual Retail Fuel Outlet Report Results (CEC-A15). August 31, 2020. Available online: <https://www.energy.ca.gov/media/3874>. Accessed January 27, 2022.

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs and delivered through high-pressure transmission pipelines. Natural gas provides almost one-third of California’s total energy requirements and is measured in terms of both cubic feet and Btu.

PG&E provides natural gas conveyance services to “core” customers and to “non-core” customers (industrial, large commercial, and natural gas-fired electric generation facilities) that are connected to its gas system in its service territory. Core customers can purchase natural gas procurement service (natural gas supply) from either PG&E or non-utility third-party gas procurement service providers (referred to as “core transport agents”). When core customers purchase gas supply from a core transport agent, PG&E still provides gas delivery, metering, and billing services to those customers. When PG&E provides both transportation and procurement services, PG&E refers to the combined service as “bundled” natural gas service.

PG&E does not provide procurement service to non-core customers, who must purchase their gas supplies from third-party suppliers. PG&E offers backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to PG&E’s backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to off-system customers (i.e., outside of PG&E’s service territory) and to third-party natural gas storage customers. 2020 natural gas usage for the state and the PG&E service region are also shown in Table 13-3.

Transportation Energy

In 2021, 11.5 billion gallons of gasoline and 2.6 billion gallons of diesel fuel were consumed in California.^{33,34} Petroleum-based fuels currently account for more than 85 percent of ground transportation fuel use in California.³⁵

The State is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHG emissions from the transportation sector, and reduce vehicle miles traveled (VMT). Accordingly, total gasoline consumption in California has declined. According to fuel sales data from the CEC, fuel consumption in San Mateo County was approximately 238 million gallons of gasoline and 27 million gallons of diesel fuel in 2020.³⁶ Refer to Table 13-3 for a summary of statewide fossil fuel consumption in 2020.

13.1.8 Local Setting

The City of Redwood City aims to increase its energy efficiency and renewable energy use to help reduce communitywide GHG emissions and provides various options and incentives for homes and businesses within the City to save energy and lower GHG emissions.

Under the Community Choice Aggregation (CCA) program, San Mateo County and all 20 of its cities and towns voted unanimously to form Peninsula Clean Energy (PCE), a community-controlled, not-for-profit, joint powers agency. As a CCA, PCE offers many environmental and economic benefits to its residential and business customers. Since 2016, residents and businesses of Redwood City have the option to choose between PG&E or PCE as a provider to supply their power. PCE customers have a choice in the amount of electricity that comes from renewable energy with two different options. By default, consumers in Redwood City are enrolled in PCE's EcoPlus option, which is made up of 50 percent renewable power and 75 percent carbon-free electricity. PCE customers can also choose to opt-up to PCE's "ECO100" made of 100 percent renewable energy.³⁷ PG&E owns the power lines and is responsible for natural gas service, maintaining infrastructure, and electricity transmission and distribution to homes and businesses throughout Redwood City. Consumers can also opt to keep PG&E as their energy provider, whose energy includes approximately 30 percent renewables.

³³ California Department of Tax and Fee Administration (CDTFA). 2022. MVF 10 Year Report. Available online: <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>. Accessed on January 27, 2022.

³⁴ CDTFA. 2022. Taxable Diesel Gallons 10 Year Report. Available online: <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>. Accessed on January 27, 2022.

³⁵ United States Energy Information Administration (USEIA). 2021. California State Profile and Energy Estimates – Profile Analysis, last updated February 18, 2021. Available online: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed January 27, 2022.

³⁶ CEC. 2020. 2020 California Annual Retail Fuel Outlet Report Results (CEC-A15). August 31, 2020. Available online: <https://www.energy.ca.gov/media/3874>. Accessed January 27, 2022.

³⁷ City of Redwood City, 2022. Energy. Available online: <https://www.redwoodcity.org/departments/public-works/environmental-initiatives/energy-initiatives>. Accessed February 2023, 2022.

Redwood City customers are eligible for a number of energy efficiency programs, including:

- Home Upgrade – Energy Upgrade California
- San Mateo County Energy Watch
- PG&E rebates and incentives
- PACE financing for energy efficiency and water conservation projects
- Electric Vehicle (EV) charging
- Solar installations
- Seismic upgrades

Go solar with Sunshares is a program administered by the Business Council on Climate Change on behalf of a coalition of Bay Area cities, municipal agencies and major employers that makes it simpler and more affordable for Bay Area residents to go solar + storage, with the goal of accelerating clean energy adoption and building regional resilience to climate change. Redwood City has been recognized as a leader in advancing solar energy by SolSmart, a U.S. Department of Energy SunShot Initiative. The City has been recognized for streamlining the solar permitting and inspection process, updating its solar codes, providing PACE financing options, and supporting Bay Area Sunshares.

13.2 Regulatory Setting

The regulatory setting has evolved significantly since certification of the DTPP Final EIR. The following section provides an overview of the overall regulatory context for GHG and energy, focusing on changes to the regulatory setting that have occurred since certification of the DTPP Final EIR or that relate to energy (which was not analyzed in the DTPP Final EIR). Section 13.2 of DTPP Final EIR Chapter 13, *Climate Change*, is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

13.2.1 Federal Regulations

Vehicle Emissions Standards

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are responsible for establishing additional vehicle standards. In August 2012, standards were adopted for model years 2017 through 2025 for passenger cars and light-duty trucks. According to EPA, a model year 2025 vehicle would emit half the GHG emissions of a model year 2010 vehicle (EPA and NHTSA, 2010). Notably, the State of California harmonized its vehicle efficiency standards through 2025 with the federal standards at this time (see *Advanced Clean Cars Program* below).

In August 2018, EPA and the NHTSA proposed maintaining the 2020 corporate average fuel economy (CAFE) and CO₂ standards for model years 2021 through 2026. The estimated CAFE

and CO₂ standards for model year 2020 are 43.7 miles per gallon (mpg) and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. In September 2019, EPA finalized the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program and announced its decision to withdraw the Clean Air Act preemption waiver granted to the State of California in 2013.³⁸

Energy Policy Act of 1992

The Energy Policy Act of 1992 was enacted to reduce U.S. dependence on foreign petroleum and improve air quality. This law includes several provisions intended to build an inventory of alternative-fueled vehicles in large, centrally-fueled fleets in metropolitan areas. The Energy Policy Act of 1992 requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty alternative fuel vehicles capable of running on alternative fuels each year. Financial incentives are also included. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of alternative fuel vehicles. The Energy Policy Act of 1992 also requires states to consider a variety of incentive programs to help promote alternative-fuel vehicles.

Energy Policy Act of 2005

The Energy Policy Act of 2005 includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), which was signed in 2009.

13.2.2 State Regulations

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs within the State. The major components of California's climate protection initiative are reviewed below.

CARB is the agency with regulatory authority over air quality issues in California. CARB adopts regulations designed to reduce criteria pollutants, toxic air contaminants, and GHG emissions; and establishes vehicle emission standards. As discussed earlier, CARB is responsible for

³⁸ USEPA and NHTSA. 2019. One National Program Rule on Federal Preemption of State Fuel Economy Standards. Available online: <https://nepis.epa.gov/Exec/ZyPDF.cgi?Dockey=P100X14W.pdf>. Accessed January 27, 2022.

preparing, adopting, and updating California’s GHG inventory. Additional responsibilities of CARB with respect to specific State mandates are discussed below.

CEQA Guidelines

The CEQA Guidelines are embodied in the California Code of Regulations (CCR), Title 14, beginning with Section 15000. The current CEQA Guidelines Section 15064.4 states that “a lead agency shall 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.” Section 15064.4 further states:

A lead agency should consider the following factors, when determining the significance of impacts from greenhouse gas emissions on the environment:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- (3) 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 greenhouse gas emissions (see e.g., section 15183.5(b)).

The CEQA Guidelines also state that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located (CEQA Guidelines Section 15064(h)(3)).

The CEQA Guidelines do not require or recommend a specific analytical method or provide quantitative criteria for determining the significance of GHG emissions, nor do they set a numerical threshold of significance for GHG emissions. Section 15064.7(c) clarifies that “when adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.”

When GHG emissions are found to be significant, CEQA Guidelines Section 15126.4(c) includes the following direction on measures to mitigate GHG emissions:

Consistent with Section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision.

- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures.
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions.
- (4) Measures that sequester greenhouse gases.
- (5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

State of California Executive Orders

Executive Order B-16-12

In March 2012, then-Governor Jerry Brown issued an executive order establishing a goal of 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025. In addition to the ZEV goal, Executive Order B-16-12 stipulated that by 2015 all major cities in California will have adequate infrastructure and be “zero-emission vehicle ready”; that by 2020 the state will have established adequate infrastructure to support 1 million ZEVs; that by 2050, virtually all personal transportation in the state will be based on ZEVs; and that GHG emissions from the transportation sector will be reduced by 80 percent below 1990 levels.

Executive Order B-30-15

Governor Brown signed Executive Order B-30-15 on April 29, 2015, which:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets; and
- Directed CARB to update the Climate Change Scoping Plan (Scoping Plan) to express the 2030 target in terms of MMTCO₂e.

Executive Order B-48-18

On January 26, 2018, Governor Brown issued an executive order establishing a goal of 5 million ZEVs on California roads by 2030.

Executive Order B-55-18

On September 10, 2018, Governor Brown signed Executive Order B-55-18, committing California to total, economy-wide carbon neutrality by 2045. Executive Order B-55-18 directs CARB to work with relevant state agencies to develop a framework to implement and accounting to track progress toward this goal.

Executive Order N-79-20

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, which sets new statewide goals for phasing out gasoline-powered cars and trucks in California. EO N-79-20 requires that 100 percent of in-state sales of new passenger cars and trucks are to be zero-emission by 2035; 100 percent of in-state sales of medium- and heavy-duty trucks and busses are to be zero-emission by 2045 where feasible; and 100 percent of off-road vehicles and equipment sales are to be zero-emission by 2035 where feasible.

State of California Policy and Legislation

Assembly Bill 117 and Senate Bill 790

In 2002, the State of California passed AB 117, enabling public agencies and joint power authorities to form a Community Choice Aggregation (CCA). SB 790 strengthened it by creating a “code of conduct” that the incumbent utilities must adhere to in their activities relative to CCAs. CCAs allow a city, county, or group of cities and counties to pool electricity demand and purchase/generate power on behalf of customers within their jurisdictions in order to provide local choice. CCAs work with PG&E to deliver power to its service area. The CCA is responsible for the electric generation (procure or develop power) while PG&E is responsible for electric delivery, power line maintenance, and monthly billing.

Senate Bills 1078 and 107

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Assembly Bill 32 and Senate Bill 32

As discussed in the DTPP Final EIR, the California Global Warming Solutions Act of 2006 (AB 32) required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was to be accomplished by enforcing a statewide cap on GHG emissions that would be phased in starting in 2012.

In 2016, SB 32 and its companion bill AB 197 amended Health and Safety Code Division 25.5, establishing a new climate pollution reduction target of 40 percent below 1990 levels by 2030, and included provisions to ensure that the benefits of state climate policies reach disadvantaged communities.

Climate Change Scoping Plan

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. CARB developed and approved the initial scoping plan in 2008, outlining the regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs that would be

needed to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives.³⁹

CARB approved the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan Update) in December 2017. The 2017 Scoping Plan Update outlines the proposed framework of action for achieving the 2030 GHG target of 40 percent reduction in GHG emissions relative to 1990 levels.⁴⁰ Through a combination of data synthesis and modeling, CARB determined that the target statewide 2030 emissions limit is 260 MMTCO₂e, and that further commitments will need to be made to achieve an additional reduction of 50 MMTCO₂e beyond current policies and programs. The cornerstone of the 2017 Scoping Plan Update is an expansion of the cap-and-trade program to meet the aggressive 2030 GHG emissions goal and ensure achievement of the 2030 limit set forth by Executive Order B-30-15.

In the 2017 Scoping Plan Update, CARB recommends statewide targets of no more than 6 MTCO₂e per capita by 2030 and no more than 2 MTCO₂e per capita by 2050. CARB acknowledges that because the statewide per-capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the state, it is appropriate for local jurisdictions to derive evidence-based local per-capita goals based on local emissions sectors and growth projections.

To demonstrate how a local jurisdiction can achieve its long-term GHG goals at the community plan level, CARB recommends developing a geographically specific GHG reduction plan (i.e., climate action plan) consistent with the requirements of CEQA Section 15183.5(b). A so-called "CEQA-qualified" GHG reduction plan, once adopted, can provide local governments with a streamlining tool for project-level environmental review of GHG emissions, provided there are adequate performance metrics for determining project consistency with the plan. Absent conformity with such a plan, CARB recommends "that projects incorporate design features and GHG reduction measures, to the degree feasible, to minimize GHG emissions. Achieving no net additional increase in GHG emissions, resulting in no contribution to GHG impacts, is an appropriate overall objective for new development." While acknowledging that recent land use development projects in California have demonstrated the feasibility to achieve zero net additional GHG emissions (e.g., Newhall Ranch Resource Management and Development Plan), the 2017 Scoping Plan Update states that:

Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA. Lead agencies have the discretion to develop evidence-based numeric thresholds (mass emissions, per capita, or per service population) consistent with this Scoping Plan, the State's long-term GHG goals, and climate change science... To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies

³⁹ CARB. 2008. Climate Change Scoping Plan: A Framework for Change, December 2008. Available online: https://ww3.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed January 13, 2022.

⁴⁰ CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017. Available online: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 30, 2022.

prioritize on-site design features that reduce emissions, especially from VMT [vehicle miles traveled], and direct investments in GHG reductions within the project’s region that contribute potential air quality, health, and economic co-benefits locally.

Cap-and-Trade Program

Initially authorized by AB 32 and extended through the year 2030 with the passage of AB 398 (2017), the California Cap-and-Trade Program is a core strategy that the state is using to meet its GHG reduction targets for 2020 and 2030, and ultimately achieve an 80 percent reduction from 1990 levels by 2050. CARB designed and adopted the California Cap-and-Trade Program to reduce GHG emissions from “covered entities”⁴¹ (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 MTCO₂e per year), setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve reductions.⁴² Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors. The statewide cap for GHG emissions from the capped sectors commenced in 2013. The cap declines over time. Facilities subject to the cap can trade offsets and allowances to emit GHGs.⁴³

Senate Bill 375

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, CARB approved GHG reduction targets in February 2011 for California’s 18 federally designated regional planning bodies, known as Metropolitan Planning Organizations. The target reductions for the Bay Area are a regional reduction of per-capita GHG emissions from cars and light-duty trucks by 7 percent by 2020 and by 15 percent by 2035, compared to a 2005 baseline.

The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) address these goals in *Plan Bay Area 2040*, which identifies Priority Development Areas (PDAs) near transit options to reduce the use of on-road vehicles. By focusing and incentivizing future growth in PDAs, *Plan Bay Area 2040* demonstrates how the nine-county Bay Area can reduce per-capita CO₂ emissions by 16 percent by 2035.⁴⁴ In a March 2018 hearing, CARB approved revised targets: to reduce per-capita emissions 10 percent by 2020 and 19 percent by 2035.⁴⁵ MTC and ABAG adopted *Plan Bay Area 2050* in October 2021, but CARB has not made a determination yet on whether the plan achieves the required targets. As such, the currently applicable plan is still *Plan Bay Area 2040*.

⁴¹ “Covered entity” means an entity in California that has one or more of the processes or operations and has a compliance obligation as specified in Sub article 7 of the Cap-and-Trade Regulation; and that has emitted, produced, imported, manufactured, or delivered in 2008 or any subsequent year more than the applicable threshold level specified in section 95812(a) of the Regulation.

⁴² 17 CCR 95800–96023.

⁴³ See generally 17 CCR 95811 and 95812.

⁴⁴ MTC & ABAG. 2017. Plan Bay Area 2040. Adopted July 26, 2017. Available online: https://mtc.ca.gov/sites/default/files/Final_Plan_Bay_Area_2040.pdf. Accessed January 27, 2022.

⁴⁵ CARB. 2018. Resolution 18-12: Proposed Update to Senate Bill 375 Greenhouse Gas Emissions Reduction Targets, March 22, 2018. Available online: <https://ww3.arb.ca.gov/board/res/2018/res18-12.pdf>. Accessed May 2020.

California Renewables Portfolio Standard (RPS)

Senate Bills 1078 and 107

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill X 1-2

SB X 1-2, signed by Governor Brown in April 2011, enacted the California Renewable Energy Resources Act. The law obligated all California electricity providers, including investor-owned and publicly owned utilities, to obtain at least 33 percent of their energy from renewable resources by the year 2020.

Senate Bill 350

SB 350, the Clean Energy and Pollution Reduction Act of 2015 (Chapter 547, Statutes of 2015), was approved by Governor Brown on October 7, 2015. SB 350 increased the standards of the California RPS program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased from 33 percent to 50 percent by December 31, 2030. The act requires the State Energy Resources Conservation and Development Commission to establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in existing electricity and natural gas final end uses of retail customers by January 1, 2030.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, establishing that 100 percent of all electricity in California must be obtained from renewable and zero-carbon energy resources by December 31, 2045. SB 100 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the law increases the percentage of energy that both investor-owned utilities and publicly owned utilities must obtain from renewable sources from 50 percent to 60 percent by 2030. Incrementally, these energy providers must also have a renewable energy supply of 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The updated RPS goals are considered achievable, because many California energy providers are already meeting or exceeding the RPS goals established by SB 350.

Advanced Clean Cars Program

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZEVs. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

In response to a midterm review of the standards in March 2017, CARB directed staff to begin working on post-2025 model year vehicle regulations (Advanced Clean Cars II) to research additional measures to reduce air pollution from light-duty and medium-duty vehicles. Additionally, as described earlier, in September 2020, Governor Newsom signed Executive Order N-79-20 that established a goal that 100 percent of California sales of new passenger car and trucks be zero-emission by 2035 and directed CARB to develop and propose regulations toward this goal. The primary mechanism for achieving these targets for passenger cars and light trucks is the Advanced Clean Cars II Program.

Mobile Source Strategy

In May 2016, CARB released the updated Mobile Source Strategy that demonstrates how the state can simultaneously meet air quality standards, achieve GHG emission reduction targets, decrease health risk from transportation emissions, and reduce petroleum consumption over the next 15 years. The strategy promotes a transition to zero-emission and low-emission vehicles, cleaner transit systems and reduction of VMT. The Mobile Source Strategy calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) by 2025 and 4.2 million ZEVs by 2030. The strategy also calls for more-stringent GHG requirements for light-duty vehicles beyond 2025 as well as GHG reductions from medium-duty and heavy-duty vehicles and increased deployment of zero emission trucks primarily for class 3–7 “last mile” delivery trucks in California. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in GHG emissions from mobile sources and a 50 percent reduction in the consumption of petroleum-based fuels.⁴⁶

Similar to the 2016 Mobile Source Strategy, the 2020 Strategy is a framework that identifies the levels of cleaner technologies necessary to meet the many goals and high-level regulatory concepts that would allow the State to achieve the levels of cleaner technology. The 2020 Strategy will inform the development of other planning efforts including the State Implementation Plan (SIP) which will translate the concepts included into concrete measures and commitments for specific levels of emissions reductions, the 2022 Climate Change Scoping Plan (2022 Scoping Plan Update), and Community Emissions Reduction Plans (CERPs) required for communities selected as a part of CARB’s Community Air Protection Program. Central to all of these planning efforts, and CARB actions on mobile sources going forward, will be environmental justice as CARB strives to address longstanding environmental and health inequities from elevated levels of toxics, criteria pollutants, and secondary impacts of climate change.⁴⁷ The 2020 Mobile Source Strategy illustrates that an aggressive deployment of ZEVs will be needed for the State to meet federal air quality requirements and the State’s climate change targets.

⁴⁶ CARB. 2016. Mobile Source Strategy, May 2016. Available online: <https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>. Accessed January 30, 2022.

⁴⁷ CARB. 2021. 2020 Mobile Source Strategy, October 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf. Accessed on January 30, 2022.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling to reduce public exposure to diesel particulate matter emissions (13 CCR Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure prohibits diesel-fueled commercial vehicles from idling for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in GHG reduction and energy savings in the form of reduced fuel consumption from unnecessary idling.

Airborne Toxic Control Measure for Stationary Compression Ignition Engines

In 2004, CARB adopted an Airborne Toxic Control Measure to reduce public exposure to emissions of diesel particulate matter and criteria pollutants from stationary diesel-fueled compression ignition engines (17 CCR Section 93115). The measure applies to any person who owns or operates a stationary compression ignition engine in California with a rated brake horsepower greater than 50, or to anyone who either sells, offers for sale, leases, or purchases a stationary compression ignition engine. This measure outlines fuel and fuel additive requirements; emissions standards; recordkeeping, reporting and monitoring requirements; and compliance schedules for compression ignition engines.

Truck and Bus Regulation

In addition to limiting exhaust from idling trucks, in 2008 CARB approved the Truck and Bus Regulation to reduce the emissions of oxides of nitrogen and particulate matter from existing diesel vehicles operating in California (13 CCR Section 2025). The phased regulation aims to reduce emissions by requiring installation of diesel soot filters and encouraging the retirement, replacement, or retrofit of older engines with newer emission-controlled models. This regulation will be implemented in phases, with full implementation by 2023.

CARB also promulgated emissions standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles. The In-Use Off-Road Diesel-Fueled Fleets regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installing diesel soot filters and encouraging the retirement, replacement, or repowering of older, dirtier engines with newer emissions-controlled models (13 CCR Section 2449). The compliance schedule requires full implementation by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

Advanced Clean Trucks Program

On June 25, 2020, CARB adopted the Advanced Clean Trucks rule, which requires truck manufacturers to transition from diesel vehicles to electric ZEVs beginning in 2024, with the goal of reaching 100 percent ZEVs by 2045. The goal of the legislation is to help California meet its climate targets of a 40 percent reduction in GHG emissions and a 50 percent reduction in petroleum use by 2030, and an 80 percent reduction in GHG emissions by 2050.

Truck manufacturers will be required to sell ZEVs as an increasing percentage of their annual sales from 2024 through 2035. Companies with large distribution fleets (50 or more trucks) will be required to report information about their existing fleet operations in an effort to identify future strategies for increasing zero-emission fleets statewide.⁴⁸

ZEVs are two to five times more energy efficient than diesel vehicles, and the Advanced Clean Trucks rule will reduce GHG emissions with the co-benefit of reducing dependence on petroleum fuels.

Senate Bill 743

In 2013, Governor Brown signed SB 743, which added Public Resources Code Section 21099 to CEQA. SB 743 changed the way that transportation impacts are analyzed under CEQA, better aligning local environmental review with statewide objectives to reduce GHG emissions, encourage infill mixed-use development in designated priority development areas, reduce regional sprawl development, and reduce VMT in California.

As required under SB 743, OPR developed potential metrics to measure transportation impacts that may include, but are not limited to, VMT, VMT per capita, automobile trip generation rates, or automobile trips generated. The new VMT metric is intended to replace the use of automobile delay and level of service as the metric to analyze transportation impacts under CEQA.

In its 2018 *Technical Advisory on Evaluating Transportation Impacts in CEQA*, OPR recommends different thresholds of significance for projects depending on land use types.⁴⁹

Senate Bill 1383 (Short-Lived Climate Pollutants)

SB 1383, enacted in 2016, requires statewide reductions in short-lived climate pollutants across various industry sectors. The climate pollutants covered under SB 1383 include methane, fluorinated gases, and black carbon—all GHGs with a much higher warming impact than CO₂ and with the potential to have detrimental effects on human health. SB 1383 requires CARB to adopt a strategy to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The methane emissions reduction goals include a 75 percent reduction in the level of statewide disposal of organic waste from 2014 levels by 2025.

Assembly Bill 341

AB 341, which became law in 2011, established a new statewide goal of 75 percent recycling through source reduction, recycling, and composting by 2020. The new law changed the way that the state measures progress toward the 75 percent recycling goal, focusing on source reduction, recycling, and composting. AB 341 also requires all businesses and public entities that generate

⁴⁸ CARB. 2021. 2020 Mobile Source Strategy, October 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf. Accessed on January 30, 2022.

⁴⁹ Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018. Available online: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed January 30, 2022.

4 cubic yards or more of waste per week to have a recycling program in place. The purpose of the law is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and expand the opportunity for additional recycling services and recycling manufacturing facilities in California.⁵⁰

Assembly Bill 1826

AB 1826, known as the Commercial Organic Waste Recycling Law, became effective on January 1, 2016, and requires businesses and multi-family complexes (with five units or more) that generate specified amounts of organic waste (compost) to arrange for organics collection services. The law phases in the requirements on businesses with full implementation realized in 2019:

- **First Tier:** Commenced in April 2016, the first tier of affected businesses included those that generate 8 or more cubic yards of organic materials per week.
- **Second Tier:** In January 2017, the affected businesses expanded to include those that generate 4 or more cubic yards of organic materials per week.
- **Third Tier:** In January 2019, the affected businesses expanded further to include those that generate 4 or more cubic yards of commercial solid waste per week.

State of California Building Codes

California Building and Energy Efficiency Standards (Title 24)

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although the standards were not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and non-residential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The current Title 24, Part 6 standards (2019 standards; CEC, 2018) were made effective on January 1, 2020.

On August 11, 2021, the CEC adopted the 2022 Energy Code and was approved by the California Building Standards Commission for inclusion into the California Building Standards Code (CEC, 2021). The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for or after January 1, 2023, must comply with the 2022 Energy Code. The 2022 Update includes measures that will reduce energy use in single family, multifamily, and nonresidential buildings. These measures will affect newly constructed buildings and:

⁵⁰ California Department of Resources Recycling and Recovery (CDRRR). 2021. *California's 75 Percent Initiative Defining the Future*, Last updated December 28, 2021. Available online: <https://www.calrecycle.ca.gov/75percent>. Accessed January 20, 2022.

- Add new prescriptive and performance standards for electric heat pumps for space conditioning and water heating, as appropriate for the various climate zones in California;
- Require photovoltaic and battery storage systems for newly constructed multifamily and selected nonresidential buildings;
- Establish efficiency measures for lighting, building envelope, HVAC, and ventilation for indoor air quality; and
- Make improvements to reduce the energy loads of certain equipment covered by (i.e., subject to the requirements of) the Energy Code that perform a commercial process that is not related to the occupant needs in the building (such as refrigeration equipment in refrigerated warehouses, or air conditioning for computer equipment in data processing centers).

California Green Building Standards Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards Code (CALGreen Code). The CALGreen Code is intended to encourage more sustainable and environmentally friendly building practices, require low-pollution-emitting substances that cause less harm to the environment, conserve natural resources, and promote the use of energy-efficient materials and equipment. CALGreen covers a number of fields, with regulations encompassing energy efficiency, water conservation, sustainable building materials, site design, and air quality.

Since 2011, the CALGreen Code has been mandatory for all new residential and non-residential buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is reviewed and updated on a three-year cycle.

The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and non-residential uses; the new measures took effect on January 1, 2020 (California Building Standards Commission [CBSC], 2019). The 2019 standards prescribe EV charging requirements for residential and non-residential buildings.

The 2022 CALGreen update simplifies the code and its application in several ways. It offers new voluntary prerequisites for builders to choose from, such as battery storage system controls and heat pump space, and water heating, to encourage building electrification. While the 2019 CALGreen Code only requires provision of EV Capable spaces with no requirement for chargers to be installed at multifamily dwellings, the 2022 CALGreen code mandates chargers (California Housing and Community Development, n.d.).

Regional Regulations and Plans

The BAAQMD is the regional government agency that regulates stationary sources of air pollution in the nine San Francisco Bay Area counties. BAAQMD regulates GHG emissions through the following plans, programs, and guidelines.

BAAQMD Clean Air Plan

BAAQMD and other air districts prepare clean air plans in accordance with the federal and state Clean Air Acts. On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 *Clean Air Plan: Spare the Air, Cool the Climate*, an update to the 2010 Clean Air Plan (BAAQMD, 2017a). The 2017 Clean Air Plan is a comprehensive plan that focuses on the closely related goals of protecting public health and protecting the climate. Consistent with the State's GHG reduction targets, the plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

BAAQMD Climate Protection Program

BAAQMD established a climate protection program (Program) to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The Program is focused on meeting the 2050 target, as the 2017 Clean Air Plan discussed above is focused on the interim 2030 target. The Program includes measures that promote energy efficiency, reduce VMT, and develop alternative sources of energy, all of which assist in reducing GHG emissions and reducing air pollutants that affect the health of residents. BAAQMD also seeks to support other 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 in the Bay Area. The guidelines also include recommended assessment methodologies for air toxics, odors, and GHG emissions. In June 2010, BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the BAAQMD CEQA Guidelines, which included significance thresholds for GHG emissions based on the emission reduction goals for 2020 articulated by the California Legislature in AB 32. The first threshold, 1,100 MTCO₂e per year, is a numeric emissions level below which a project's contribution to global climate change would be less than cumulatively considerable. For larger and mixed-use projects, the guidelines state that emissions would be less than cumulatively significant if the project as a whole would result in an efficiency of 4.6 MTCO₂e per service population or better. Because these thresholds are based on a 2020 GHG target they are no longer relevant for current and future projects. Under the current BAAQMD Air Quality Guidelines, a local government may prepare a qualified GHG reduction strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified GHG 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.⁵¹

⁵¹ BAAQMD. 2017. California Environmental Quality Act Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed January 03, 2022.

In April 2022, in response to SB 32 and 2017 Scoping Plan Update targets for 2030 and EO B-15 target for carbon neutrality no later than 2045, the BAAQMD adopted new CEQA significance thresholds for GHGs and published a Justification Report (BAAQMD, 2022).

Plan Bay Area

The MTC is the federally recognized Metropolitan Planning Organization for the nine-county Bay Area, which includes San Mateo County and the city of Redwood City. On July 18, 2013, Plan Bay Area was jointly approved by ABAG’s Executive Board and the MTC. The plan includes the region’s Sustainable Communities Strategy, as required under SB 375, and the 2040 Regional Transportation Plan. The Sustainable Communities Strategy lays out how the region will meet GHG reduction targets set by CARB. CARB’s current targets call for the region to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline.⁵²

A central GHG reduction strategy of Plan Bay Area is the concentration of future growth in PDAs and Transit Priority Areas (TPAs). To be eligible for PDA designation, an area must be within an existing community, near existing or planned fixed transit or served by comparable bus service and planned for more housing. A TPA is an area within 0.5 miles of an existing or planned major transit stop such as a rail transit station, a ferry terminal served by transit, or the intersection of two or more major bus routes.⁵³

On July 26, 2017, MTC adopted *Plan Bay Area 2040*, a focused update that builds upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning assumptions that incorporate key economic, demographic, and financial trends since the original plan was adopted.⁵⁴

On October 21, 2021, the MTC and the Executive Board of the ABAG jointly adopted *Plan Bay Area 2050* and its related supplemental reports. *Plan Bay Area 2050* connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan’s Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years to make headway on each of the 35 strategies.⁵⁵ The amended DTPP area is located within both a PDA and a TPA. It will be several years before the regional transportation model and county transportation models are updated to reflect Plan Bay Area 2050 (the models currently incorporate data from Plan Bay Area 2040).

⁵² CARB. 2018b. *SB 375 Regional Greenhouse Gas Emissions Reduction Targets, March 2018*. Available online: <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. Accessed January 27, 2022.

⁵³ Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2013. *Bay Area Plan – Strategy for A Sustainable Region*, July 13, 2013. Available online: http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/Plan_Bay_Area.pdf. Accessed on January 30, 2022.

⁵⁴ MTC & ABAG. 2017. *Plan Bay Area 2040*. Adopted July 26, 2017. Available online: https://mtc.ca.gov/sites/default/files/Final_Plan_Bay_Area_2040.pdf. Accessed January 27, 2022.

⁵⁵ MTC & ABAG. 2021. *Plan Bay Area 2050*, Adopted October 21, 2021. Available online: https://planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed January 28, 2022.

13.2.3 Local Regulations and Plans

Redwood City General Plan

Goals, policies and programs related to GHGs, energy conservation and sea level rise in the current 2010 Redwood City General Plan⁵⁶ were included in the DTPP Final EIR. There have been no changes to them since the DTPP Final EIR.

Redwood City Climate Action Plan

The City of Redwood City *Climate Action Plan*⁵⁷ was developed as the community's roadmap for addressing climate change and increasing resiliency in adapting to the impacts of climate change. In California, aggressive climate change goals have been set by the State to curb GHG emissions, with local governments implementing much of the policy. The CAP establishes the goal of reducing carbon emissions 50 percent below 2005 levels by 2030, an interim step toward the ultimate goal of achieving carbon neutrality well before 2045. The CAP identifies 33 quantifiable emissions reduction measures in four sectors for Redwood City to reduce GHG emissions to achieve the 2030 and 2045 targets:

- **Transportation & Land Use** - Strategies aim to encourage public transit use, change commuting habits, and promote transit-oriented land use planning to help reduce GHG emissions by reducing the number of miles driven by single passenger vehicles, and increasing housing near transit.
- **Energy & Water** - Strategies address energy that is used in community and public facilities, as well as in water treatment and transportation and provide opportunities to reduce energy use, shift from natural gas to electricity, and reduce water consumption.
- **Solid Waste** - This includes emissions from solid waste generation and disposal. The primary goal is to reduce emissions by encouraging the community to reduce waste. The secondary goal is to divert it from the landfill through recycling and composting.
- **Food & Consumption** - This includes the goods and services bought from outside San Mateo County. This strategy explores how to reduce food waste, shop local, and curb unnecessary air travel.

Redwood City Reach Codes

Reach Codes are amendments to the Energy and Green Building Standards Codes to reduce GHGs. Adopting Reach Codes create opportunities for local governments to lead initiatives on climate change solutions, clean air, and renewable energy. In September 2020, the Redwood City Council approved the Reach Codes ordinance (Ordinance No. 2487; City of Redwood City, 2020b) that mandates electrification, solar readiness of buildings, provision of EV charging infrastructure, and energy efficiency for all new construction projects. The Reach Codes establish

⁵⁶ City of Redwood City, 2010. Redwood City General Plan – Public Safety Element, October 11, 2010. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/5109/635782756603530000>, accessed February 3, 2022.

⁵⁷ City of Redwood City. 2020. Climate Action Plan. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>. Accessed February 23, 2022

higher standards for new construction to provide environmental and health benefits to the community. The Redwood City Reach Codes focus on new residential, commercial, and multifamily buildings that will be seeking building permits after December 9, 2020. The ordinance does not apply to additions or alterations.

Specifically, the Reach Codes requires all new construction to be all-electric buildings with no natural gas or propane plumbing installed within the building. The Codes allow for certain exceptions subject to the discretion of the City’s Community Development and Transportation Department. Exceptions to the all-electric requirement may be granted to accessory dwelling units, non-residential buildings constructed to Office of Statewide Health Planning and Development Hospital standards, factories/industrial buildings, high-hazard buildings, scientific laboratory areas, commercial kitchens, and new residential structures that designate 100 percent of the dwelling units to be affordable. In addition, the Reach Codes include mandatory requirements for solar ready buildings and EV charging infrastructure, with certain exceptions.^{58,59}

Redwood City Transportation Demand Management Ordinance

In December 2021, the City adopted a Transportation Demand Management (TDM) ordinance. The TDM ordinance requires all new development in the City that meet specified development thresholds (generally 25 or more units and/or 10,000 square feet or more commercial development, including offices development) to develop a TDM plan and requires annual monitoring with financial incentives to meet specified targets. This ordinance would further reduce VMT from development allowed by the proposed DTPP Plan-Wide Amendments by incentivizing reduced vehicle trips and increased multimodal trips.

13.3 Impacts and Mitigation Measures

13.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe climate change impacts that would result from implementation of the proposed DTPP Plan-Wide Amendments, in relation to the DTPP Final EIR certified in 2011.

GHG Impacts

GHG emissions and global climate change represent cumulative impacts from human activities and development projects locally, regionally, statewide, nationally, and worldwide. GHG emissions

⁵⁸ City of Redwood City, 2020. Ordinance 2487 – An Ordinance of the City of Redwood City Adding Article XV of Chapter 9 of the Redwood City Code to Adopt Local Amendments to 2019 Edition of the California Energy Code and Green Building Standards Codes, Together with Certain Amendments, Exceptions, Modifications and Additions Thereto, September 21, 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23035/637473438954470000>, accessed February 3, 2022.

⁵⁹ On November 14, 2022, the City Council was scheduled to further limit the exceptions to the all-electric buildings requirements for both residential and non-residential new construction. If the revised Reach Codes are approved, effective January 1, 2023, an exception will be granted only if an applicant “establishes by substantial evidence that an all-electric building is infeasible for the project due to exceptional or extraordinary circumstances particular to the project.”

from all of these sources cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects around the world have contributed and will continue to contribute to global climate change and its associated environmental impacts. There are currently no established thresholds for assessing whether the GHG emissions of a project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts⁶⁰, GHG emissions impacts must also be evaluated on a project-level under CEQA. The method for evaluating GHG impacts in this SEIR uses a qualitative consistency determination of the proposed DTPP Plan-Wide Amendments with the BAAQMD's adopted project-level GHG thresholds as discussed below. This evaluation is considered in a cumulative context, and because the analysis of GHG emissions is only relevant in a cumulative context, a project-specific impact assessment is not required.

Impact on Sea Level Rise

The DTPP Final EIR identified potential flooding due to sea level rise as a potentially significant impact. However, California Supreme Court's decision in *California Building Industry Association (CBIA) v. Bay Area Air Quality Management District* (2015) confirmed that CEQA, with several certain exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Consequently, the sea level rise assessment in this SEIR focuses on whether the proposed DTPP Plan-Wide Amendments may exacerbate the effects of sea level rise.

Energy Impacts

Significance criteria for the evaluation of energy impacts were introduced to Appendix G of the CEQA Guidelines in 2018. Therefore, energy impacts were not analyzed in the DTPP Final EIR and would be considered new impacts not previously identified in the DTPP Final EIR. The analysis presented below provides a qualitative assessment of whether energy use associated with development allowed by the proposed DTPP Plan-Wide Amendments would result in wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

13.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the proposed DTPP Plan-Wide Amendments would:

⁶⁰ California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA & Climate Change, January 2008. Available online: <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed January 30, 2022.

- generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases; or
- cause wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In addition, because the DTPP Final EIR analyzed impacts related to climate change, including sea level rise, this SEIR considers the following additional criterion. The proposed DTPP Plan-Wide Amendments would result in a significant impact to climate change if it would:

- exacerbate impacts related to sea level rise.

The CEQA Guidelines do not prescribe specific methods for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency’s discretion to determine the appropriate methods and thresholds of significance consistent with various factors prescribed by CEQA Guideline 15064.4. The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor’s Office of Planning and Research’s Technical Advisory, titled *Discussion Draft CEQA and Climate Change Advisory* (OPR, 2018), states that:

[N]either the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

Furthermore, the advisory document indicates that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant impact,’ individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.” Section 15064.7(c) of the CEQA Guidelines specifies that “when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.”

GHG Emissions

The city, as the lead agency, has discretion to choose thresholds of significance, including thresholds adopted or recommended by other agencies or recommended by experts, such as those recommended by the BAAQMD, provided the lead agency’s decision to use such thresholds is

supported by substantial evidence.⁶¹ As discussed earlier, in April 2022, the BAAQMD adopted new significance thresholds that address the State’s SB 32 GHG reduction goals and carbon neutrality goal for 2045, as stipulated in Executive Order B-55-18. The District also published a Justification Report that provides the substantial evidence that lead agencies will need to support their use of these thresholds, which are described below.⁶²

The recommended plan-level GHG thresholds adopted by the BAAQMD are as follows:

Meet State’s goals to achieve emissions 40 percent below 1990 levels by 2030, and carbon neutrality by 2045; OR

Be consistent with a local GHG Reduction Strategy that meets the criteria under CEQA Guidelines section 15183.5(b).

The recommended project-level GHG thresholds adopted by the BAAQMD are as follows:

Projects must include, at a minimum, the following project design elements:

Buildings

- a. The project will not include natural gas appliances or natural gas plumbing (in both residential and non-residential development)
- b. The project will not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

Transportation

Achieve compliance with EV requirements in the most recently adopted version of CALGreen Tier 2

Achieve a reduction in project-generated VMT below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent)

OR

Meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA:

Residential projects: 15 percent below the existing VMT per capita

Office projects: 15 percent below the existing VMT per employee

Retail projects: no net increase in existing VMT

OR

⁶¹ OPR, 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018. Available online: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed January 30, 2022.

⁶² BAAQMD, 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Change Impacts from Land Use Projects and Plans, April 2022. Available at: https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en. Accessed April 2022.

Be consistent with a local GHG Reduction Strategy that meets the criteria under the CEQA Guidelines section 15183.5(b).

The BAAQMD developed these thresholds of significance based on typical residential and commercial land use projects and typical long-term communitywide planning documents such as general plans and similar long-range development plans, and they would therefore be applicable to the DTPP Plan-Wide Amendments. The BAAQMD’s adopted plan-level thresholds consider planning documents to have a less-than-significant climate impact if they demonstrate that GHG emissions from the jurisdiction will decline in accordance with California’s GHG reduction targets of 40 percent below 1990 levels by 2030 and carbon neutrality by 2045 with the full implementation of the plan. However, this threshold merely reiterates the GHG reduction and carbon neutrality goals adopted by the State and does not provide a mechanism or metrics for plans to evaluate consistency with these goals. For this reason, and to ensure consistency with State goals, the BAAQMD’s project-level thresholds have been used for this analysis.

Specifically, option (A) of the project-level thresholds are used as the significance thresholds in this SEIR. Applying the BAAQMD’s adopted project-level thresholds to the proposed DTPP Plan-Wide Amendments in this SEIR evaluates the capacity for all future projects proposed for development under the DTPP Plan-Wide Amendments to contribute their fair share GHG emission reductions to achieving the State’s goals to achieve emissions 40 percent below 1990 levels by 2030 and carbon neutrality by 2045, as stipulated in BAAQMD’s adopted plan-level threshold (A). This is the same logic that the BAAQMD is employing to determine the significance of project-level GHG emissions. In other words, if all future projects proposed for development pursuant to the DTPP Plan-Wide Amendments consume no natural gas per measure (1)(a), avoid wasteful, inefficient, or unnecessary electrical usage per measure (1)(b), comply with EV requirements in CALGreen Tier 2 per measure (2)(a), and achieve the SB 743 target of 15 percent reduction in VMT per capita below the regional average per measure (2)(b), then collectively all projects would have a less-than-significant impact on climate change and would be consistent with the statewide targets for 2030 and 2045.

The BAAQMD has provided the required substantial evidence for this argument in their justification report.⁶³ To summarize,

If a project is designed and built to incorporate these design elements, then it will contribute its portion of what is necessary to achieve California’s long-term climate goals—its “fair share”—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. If the project does not incorporate these design elements, then it should be found to make a significant climate impact because it will hinder California’s efforts to address climate change.

⁶³ BAAQMD, 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Change Impacts from Land Use Projects and Plans, April 2022. Available at: <https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en>. Accessed April 2022.

Thus, for purposes of this SEIR, a significant GHG impact would be identified if development allowed by the proposed DTPP Plan-Wide Amendments does not incorporate the following performance standards adopted by the BAAQMD:

1. No natural gas to all projects proposed for development within the amended DTPP area;
2. Avoid wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines;
3. Compliance with EV requirements in the most recently adopted version of CALGreen Tier 2; and
4. Consistency with the SB 743 target of at least 15 percent reduction in VMT per capita below regional average. This amounts to 10.5 miles per resident and 15.0 miles per employee, which is 85 percent of the baseline countywide average of 12.3 miles per resident and 17.6 miles per employee.

Consistency with Plans, Policies, and Regulations for GHG Reduction

GHG impacts are also evaluated by assessing whether the proposed DTPP Plan-Wide Amendments would conflict with applicable GHG reduction strategies and local actions approved or adopted by CARB, SCAG, and the County. The 2017 Scoping Plan Update, ABAG's Plan Bay Area 2040, the City of Redwood City Climate Action Plan, and City General Plan policies and goals all apply to the DTPP Plan-Wide Amendments and all are intended to reduce GHG emissions to meet the Statewide targets set forth in AB 32, as amended by SB 32. Thus, the significance of GHG emissions generated by the proposed DTPP Plan-Wide Amendments is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether implementation of the DTPP Plan-Wide Amendments would conflict with applicable plans, policies, regulations adopted for the purpose of reducing GHG emissions, including CARB's 2017 Scoping Plan Update, SB 37 and E-3-05, Plan Bay Area 2040, the City of Redwood City Climate Action Plan, and the CALGreen Code and City Green Building Codes.

Consumption of Energy Resources and Consistency with Plans, Policies and Regulations for Energy

The analysis of energy impacts considers the State CEQA Guidelines Appendix G thresholds, as described above, in determining whether the proposed DTPP Plan-Wide Amendments would result in the inefficient, wasteful, or unnecessary use of energy. The evaluation is based on a review of regulations and determining their applicability to the DTPP Plan-Wide Amendments. As discussed earlier, there are several plans and policies at the federal, state and local levels to increase energy conservation and the use of renewable energy. Consistency of the DTPP Plan-Wide Amendments with these regulations would also ensure that energy use associated with the DTPP Plan-Wide Amendments would not result in the inefficient, wasteful, or unnecessary use of energy. Therefore, impacts with respect to both energy criteria are discussed together.

Sea Level Rise

Sea level rise and the related potential for increased flooding are impacts of climate change from increased GHG emissions. The proposed DTPP Plan-Wide Amendments would have a significant impact if resulting GHG emissions or other features of the project would exacerbate effects of sea level rise. GHG emissions would not exacerbate effects of sea level rise if GHG impacts as determined with respect to Appendix G significance criteria a) and b) are found to be less than significant.⁶⁴

13.3.3 Impacts and Mitigation Measures

Overall, despite changes to the regulatory requirements addressing GHGs and recommended significance thresholds, impacts of the proposed DTPP Plan-Wide Amendments to climate change would be similar to the DTPP Final EIR, although impacts related to GHG emissions would be greater, and impacts related to sea level rise would be reduced compared to the DTPP Final EIR. However, because the methodologies have changed, this SEIR reaches a different significance conclusion than did the DTPP Final EIR. Impacts related to energy use and conservation discussed below were not evaluated in the DTPP Final EIR.

Impact CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (*Significant and Unavoidable with Mitigation*)

DTPP Impact Summary

The DTPP Final EIR found that GHG emissions generated by the implementation of the DTPP would be less than the BAAQMD's then applicable threshold of 4.6 MTCO₂e per service population and would therefore result in a *less than significant* impact.

Project Impacts

GHG emissions from development allowed by the DTPP Plan-Wide Amendments would result in both direct and indirect emissions from construction (including off-site utility improvements) and operational activities. Direct GHG emissions generated during construction would include emissions from the combustion of fuel (e.g., gasoline and diesel) in construction equipment and vehicles. Indirect GHG emissions during construction would be generated from electricity used to power any electric construction equipment, lighting at construction sites and for conveyance of water used for dust suppression activities. Upon completion of construction, development projects would generate direct GHG emissions from area sources (such as landscaping equipment) and on-road motor vehicle trips. GHG emissions could be generated from natural gas use in buildings for space and water heating, although the City's Reach Codes require all new construction, with certain exceptions, to be all-electric buildings with no natural gas infrastructure. Indirect operational GHG

⁶⁴ As noted earlier, the first two criteria included in Appendix G of the State CEQA Guidelines for this topic ask whether the project would (a) generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or (b) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

emissions would be generated from the increase in electricity use associated with building energy use along with electricity needs for water and wastewater treatment and conveyance.

For the evaluation of GHG impacts, the BAAQMD's adopted GHG thresholds address the two main direct sources of GHG emissions in land use development projects: building energy use and motor vehicle trips.

Compliance with No Natural Gas Requirement

As detailed in the Regulatory Setting, the City of Redwood City has adopted Reach Codes as part of Ordinance 2487. Reach Codes are amendments to the Energy and Green Building Standards Codes to reduce GHG emissions and include requirements beyond those required by the current Energy Code. Reach Codes adopted by the City of Redwood City include a requirement for buildings seeking building permits after December 9, 2020, to be "all-electric buildings," with certain exceptions. An "all-electric" building as defined in Section 9.250 of Ordinance 2487 is a building that has no natural gas or propane plumbing installed within the building and that uses electricity as the source of energy for its space conditioning, water heating (including pools and spas), cooking and clothes drying appliances. These Reach Codes go beyond the requirements in the 2022 Update to the Title 24 standards that will go into effect on January 1, 2023, and the Title 24 standards establish electric-ready requirements in new homes, but do not explicitly prohibit natural gas. The Reach Codes allow exceptions to the all-electric requirement, subject to the discretion of the City's Community Development and Transportation Department, for accessory dwelling units, non-residential buildings constructed to Office of Statewide Health Planning and Development Hospital standards, scientific laboratory areas, commercial kitchens, and new residential structures that designate 100 percent of the dwelling units to be affordable. Inasmuch as up to 30 percent of the office space could be devoted to Research and Development Laboratory uses, there could likely be subsequent development projects that would receive exceptions to allow for non-electric space-conditioning and water-heating system, as well as, potentially, natural gas use in manufacturing, research, and development. However, the precise nature and volume of such emissions, if any, cannot be known at this time and would be evaluated on a project-specific basis as individual project applications were received.

Avoid wasteful, inefficient, or unnecessary electrical usage

As discussed under Impact CC-3 below, development pursuant to the proposed DTPP Plan-Wide Amendments would not result in wasteful, inefficient, or unnecessary use of electricity. Compliance with the all-electric requirement in the City's Reach Codes and Tier 2 EV Requirements in CALGreen discussed below would result in an increase in electricity use; however, as these requirements are in place to ensure that development allowed by the DTPP Plan-Wide Amendments and the region's compliance with the State's GHG reduction goals, the increase would not be considered wasteful, inefficient or unnecessary. In addition, the Reach Codes also include requirements for onsite photovoltaic systems to offset part of this increase. Compliance with Title 24 energy efficiency standards and the inherent location of the amended DTPP area in close proximity to transit facilities would also ensure that electricity usage associated with development in the amended DTPP area would not be wasteful, inefficient or unnecessary.

Future development allowed by the proposed DTPP Plan-Wide Amendments would be served by PCE, a CCA that provides electricity with at least 50 percent and up to 100 percent from renewable resources. Although using a CCA does not affect the amount of electricity used, the purpose of this requirement is to reduce electricity-related GHG emissions, which a CCA would lessen or avoid independent of the amount of electricity consumed.

Compliance with Tier 2 EV Requirements in CALGreen

The 2019 California Green Building Standards Code (“CALGreen”, Title 24, Part 11) requires that new construction and major alterations include “EV Capable” parking spaces which have electrical panel capacity, a dedicated branch circuit, and a raceway to the EV parking spot to support future installation of charging stations. All new construction and qualifying additions or alterations must comply with mandatory 2019 CALGreen requirements.

In addition to the mandatory requirements, the 2019 CALGreen Code encourages local jurisdictions to raise the sustainable goals by publishing two “voluntary” tiers of additional requirements, referred to as Tier 1 and Tier 2. Tier 1 adds additional requirements beyond the mandatory measures. Tier 2 further increases the requirements. The CALGreen tiers are only mandatory where local ordinances have specifically adopted them. Tier 2 EV requirements for residential uses include the provision of at least 20 percent of the total parking spaces as “EV Capable.”⁶⁵ For non-residential uses, CALGreen Tier 2 requires 10 to 20 percent of the total parking spaces to be EV Capable depending on the number of parking spaces provided.

In October 2021, the CEC approved the 2022 CALGreen Building Standards Code which added to the 2019 CALGreen mandatory requirements. The 2022 CALGreen Code does not change the EV Capable percentages required for voluntary Tier 2 from the 2019 standards, but adds the requirement for chargers to be installed. For example, for multifamily buildings with 20 or more units, the 2022 CALGreen Code Tier 2 requires 15 percent of total parking spaces to have EVCS (Electric Vehicle Charging Stations).⁶⁶

As part of the Reach Codes, the City has adopted requirements beyond mandatory 2019 CALGreen requirements. Multifamily residential buildings with more than 20 dwelling units are required to have at least 25 percent of the parking spaces to be Level 2 EV Ready⁶⁷ with the remaining 75 percent required to be Level 1 EV Ready⁶⁸. For non-residential buildings with more than 10 parking spaces, 10 percent of the total spaces are required to be equipped with Level 2 EVCS, 10 percent are required to be Level 1 EV Ready and 30 percent are required to be EV capable. These requirements in the City’s Reach Codes exceed the EV Capable requirements set

⁶⁵ “EV Capable” refers to a parking space that is linked to a listed electrical panel with sufficient capacity to provide at least 110/120 volts and 20 amperes to the parking space.

⁶⁶ California Housing and Community Development. n.d. 2022 CALGreen, no date. Available online: <https://catc.ca.gov/-/media/ctc-media/documents/ctc-meetings/2021/2021-04/tab-2-hcd-pres-a11y.pdf>. Accessed January 30, 2022.

⁶⁷ “Level 2 EV Ready” refers to a parking space served by a complete electrical circuit with 208/240 volt, 40-ampere capacity. The electric circuit would have sufficient capacity to support EV charging in the future when it is linked to the EV Ready space.

⁶⁸ “Level 1 EV Ready” refers to a parking space served by, but not linked to a complete electrical circuit with a minimum of 110/120 volt, 20 ampere capacity.

forth in the 2019 CALGreen Tier 2 standards. However, the City Reach Codes would not be consistent with 2022 CALGreen Tier 2 and may not be consistent with future CALGreen updates. According to the BAAQMD's adopted GHG thresholds, development allowed by the DTPP Plan-Wide Amendments would be required to show compliance with the Tier 2 EV requirements in the version of CALGreen adopted at the time of project review. As discussed earlier, the CALGreen standards will continue to be updated on a triennial basis with evolving requirements for EV charging. Therefore, compliance with requirements in the City's Reach Codes would not ensure compliance with Tier 2 CALGreen requirements in future updates.

Consistency with SB 743 VMT Reduction Target of 15 percent below the regional average

As detailed earlier, with the adoption of SB 743, the State of California changed the method of traffic analysis required through CEQA for publicly- and privately-initiated projects. SB 743 requires project reviews under CEQA to evaluate the transportation impacts of new developments in terms of VMT, rather than on-road congestion and automobile delay. Based on the County's travel demand forecasting model and adjustments reflecting implementation of the City's TDM ordinance, the analysis in Chapter 9, *Transportation and Circulation*, estimates the VMT per capita generated by the proposed DTPP Plan-Wide Amendments to be 7.8 miles per resident and 14.9 miles per employee. The Countywide average is estimated to be 12.3 miles per resident and 17.6 miles per employee.

Based on these findings, the VMT generated per capita with the implementation of the DTPP Plan-Wide Amendments would be 36.6 percent below the countywide average VMT per resident and the VMT per employee would be 15.1 percent less than the countywide average. Therefore, VMT generated by the proposed DTPP Plan-Wide Amendments would meet the 15 percent reduction requirement stipulated in the BAAQMD's adopted GHG threshold for VMT. These estimates conservatively reflect a six-percent reduction in single-occupancy vehicle trips associated with the City's TDM Ordinance for the residential and office components of the proposed DTPP Plan-Wide Amendments. While the City's TDM Ordinance is mandatory, each building tenant in future development allowed by the proposed DTPP Plan-Wide Amendments would implement their own mix of TDM measures. Therefore, individual projects may be able to achieve higher trip reductions resulting in lower VMT per capita estimates.

Because compliance with the City's Reach Codes allows exceptions to the No Natural Gas standard, and does not ensure compliance with future updates to the CALGreen Tier 2 EV requirements, the proposed DTPP Plan-Wide Amendments would not comply with BAAQMD's adopted GHG thresholds, and thus would result in a *potentially significant* impact that was not identified in the DTPP Final EIR, requiring mitigation.

Mitigation Measure CC-1: Enforce No Natural Gas Requirement and Require Compliance with EV Requirements in CALGreen Tier 2.

Subsequent development allowed by the DTPP Plan-Wide Amendments shall comply with the "all electric" requirement in the City's Reach Codes in effect at the time that a building permit application is filed, and shall comply with EV requirements in the City's Reach Codes or the most recently adopted version of CALGreen Tier 2 at the time that a

building permit application is filed, whichever is more restrictive. Subsequent development projects may qualify for exceptions to Reach Codes all-electric requirements.

Significance After Mitigation: With the implementation of Mitigation Measure CC-1, GHG emissions from future projects proposed for development within the amended DTPP area would be reduced to the extent feasible. However, as explained above, the City’s Reach Codes, adopted in September 2020, allow for certain exceptions to the no-natural gas requirement, including for affordable housing; commercial kitchens; and Research and Development Laboratory spaces. As detailed in the staff report for the September 14, 2020, City Council meeting, in order for local communities to adopt local amendments to state energy-related codes, “the additional requirements must be cost effective pursuant to [California] Public Resources Code 25402.”⁶⁹ The staff report explains that the California Energy Commission “considers an energy efficiency measure cost effective if the total utility savings over the estimated useful life of the energy efficiency measure exceeds the difference of costs between the measure and the base line measure of mixed-fuel energy usage. For example, requiring all-electric space conditioning in single-family homes would be considered cost effective, if the total utility savings over 30 years exceeds the additional cost of the all-electric equipment when compared to the cost of a natural gas-powered space conditioner.”

In developing the Reach Codes, staff relied on widely cited studies conducted by Southern California Edison Company in coordination with PG&E, and conducted community and stakeholder outreach, and also considered Reach Codes adopted by other cities. In regard to commercial kitchens, the staff report explained that restaurant industry professionals had expressed concern about the current heat limitations of all-electric commercial cooking equipment and potential increased costs, particularly in light of the effect that the COVID-19 pandemic has had on the restaurant industry. Staff also noted that a number of other local cities have provided for similar exceptions. Regarding affordable housing, the staff report explained that funding sources for affordable housing developments—notably, tax credits—are subject to a maximum allowable cost per unit, meaning that added costs of electric space heating could render such projects ineligible for funding. Staff opined that this would encourage developers to exceed the City’s Affordable Housing Ordinance requirements and provide units at deeper affordability levels than they might otherwise. Staff also noted that this exception would not preclude fully electric affordable housing and that affordable housing developers would be encouraged to explore this possibility.

In summary, the City Council adopted the Redwood City Reach Codes as local policy following staff’s extensive outreach, consideration of other examples, and public input. Therefore, this SEIR considers that the full implementation of all electric building development may not be feasible because projects may qualify for exceptions to the all-electric requirements. Accordingly, this impact is conservatively determined to be **significant and unavoidable with mitigation**. (New significant and unavoidable impact, compared to DTPP Final EIR)

⁶⁹ This requirement is pursuant to Public Resources Code Section 25402.1(h)(2).

Impact CC-2: Implementation of the proposed DTPP Plan-Wide Amendments would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*Significant and Unavoidable with Mitigation*)

DTPP Impact Summary

The DTPP Final EIR did not explicitly analyze consistency of the DTPP with plans, policies, and regulations applicable at the time of review for the purpose of reducing GHG emissions, as this was not expressly part of the GHG analysis methodology at the time. The analysis concluded that the DTPP would generate emissions less than the BAAQMD's threshold at the time for consistency with the State's GHG reduction goals for 2020.

Project Impacts

CARB 2017 Scoping Plan Update, SB 32 and EO S-3-05

The 2017 Scoping Plan Update adopted by CARB establishes the framework for achieving the 2030 statewide GHG reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan Update includes local actions that land use development projects and municipalities can implement to support the statewide goal. Figure 5 of the 2017 Scoping Plan Update also illustrates that achieving the 2030 target is consistent with progress toward achieving the 2050 level included in EO S-3-05 and that depending on the success in achieving the 2030 target, it may be possible to achieve the 2050 target earlier than EO S-3-05.⁷⁰ The BAAQMD's adopted project-level GHG CEQA thresholds are designed to demonstrate consistency with CARB's 2017 Scoping Plan Update and the statewide goal of carbon neutrality by 2045 pursuant to EO B-55-13 for new projects and plans. As described under Impact CC-1, with the implementation of Mitigation Measure CC-1, the proposed DTPP Plan-Wide Amendments would be reduced to the extent feasible. Therefore, implementation of the proposed DTPP Plan-Wide Amendments would be substantially consistent with the statewide emissions reduction goal for 2030 required by SB 32 and achieved through the 2017 Scoping Plan Update.

The 2017 Scoping Plan Update incorporates a broad array of regulations, policies, and state plans designed to reduce GHG emissions. Those that are applicable to the construction and operation of development allowed by the DTPP Plan-Wide Amendments are listed in **Table 13-4**. Actions, plans, and programs that are not under the control or influence of local jurisdictions, such as the Cap-and-Trade program, are not included in the table.

As shown above, the proposed DTPP Plan-Wide Amendments would implement actions identified in the 2017 Scoping Plan Update to reduce energy use, conserve water, reduce waste generation, promote EV use, and reduce vehicle travel consistent with statewide strategies and regulations. In addition, as detailed under Impact CC-1, the proposed DTPP Plan-Wide Amendments would be substantially consistent with the BAAQMD's adopted GHG significance thresholds which, in turn, means that the proposed DTPP Plan-Wide Amendments would be substantially consistent with

⁷⁰ CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017. Available online: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 30, 2022.

and contribute a fair share to the BAAQMD's GHG reductions required to meet the statewide GHG reduction goal for 2030 pursuant to SB 32 and the 2017 Scoping Plan Update.

TABLE 13-4
CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Energy and Water		
California Renewables Portfolio Standard (RPS) and SB 100	SB 100 requires that the proportion of electricity from renewable sources be 60 percent renewable power by 2030 and 100 percent renewable power by 2045.	Consistent. Electricity supplied to development allowed by the DTPP Plan-Wide Amendments would be provided by Pacific Gas and Electric (PG&E) and Peninsula Clean Energy (PCE). PG&E and PCE are required to comply with SB 100 and the RPS.
California Renewables Portfolio Standard and SB 350	SB 350 requires that the proportion of electricity from renewable sources be 50 percent renewable power by 2030 (superseded by SB 100). It also requires the state to double the energy efficiency savings in existing final end uses of electricity and natural gas by retail customers through energy efficiency and conservation.	Consistent. Electricity to development allowed by the DTPP Plan-Wide Amendments would be provided through PG&E and PCE. PG&E and PCE are required to comply with both the RPS and SB 350 and will meet these standards.
California Building Efficiency Standards (CCR, Title 24, Part 6)	Energy Efficiency Standards for Residential and Nonresidential Buildings	Consistent. Buildings constructed as part of the proposed DTPP Plan-Wide Amendments would be designed to comply with the most recent version of Title 24 Building Energy Efficiency Standards at the time of individual project review.
California Green Building Standards Code (CCR, Title 24, Part 11 - CALGreen)	California's Green Building Standards (CALGreen) Code includes energy and water efficiency requirements, as well as waste management and other design regulations that apply to residential and nonresidential buildings.	Consistent. Buildings constructed as part of the proposed DTPP Plan-Wide Amendments would comply with mandatory CALGreen measures. In addition, Mitigation Measure CC-1 would go beyond mandatory CALGreen measures to require compliance with EV charging requirements in the City's Reach Codes or CALGreen Tier 2 EV charging requirements, whichever is more restrictive, for development within the amended DTPP area.
Senate Bill X7-7	The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban retail water supplier shall develop water use targets to meet this goal.	Consistent. Water used by the development allowed by the DTPP Plan-Wide Amendments would be supplied by the City's Public Works, which is required to comply with SB X7-7 standards.
Mobile Sources		
Advanced Clean Cars Program (ACC) and Mobile Source Strategy (MSS)	In 2012, CARB adopted the ACC program to reduce criteria pollutants and GHG emissions for model year vehicles 2015 through 2025. ACC requires the reduction of criteria pollutants and GHG emissions from light- and medium-duty vehicles. ACC also includes the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. The Mobile Source Strategy (2016) calls for 1.5 million ZEVs (including plug-in hybrid electric, battery-electric, and hydrogen fuel cell vehicles) on the road by 2025, and 4.2 million ZEVs by 2030.	Consistent. These standards would apply to all vehicles used by future users of development allowed by the DTPP Plan-Wide Amendments, and to construction workers traveling to and from the construction sites as required by CALGreen. In addition, Mitigation Measure CC-1 would go beyond mandatory CALGreen regulatory requirements for EV charging infrastructure to require compliance with EV charging requirements in the City's Reach Codes or CALGreen Tier 2 requirements, whichever is more restrictive, for development by the DTPP Plan-Wide Amendments and would therefore accommodate future EV charging stations.

TABLE 13-4 (CONTINUED)
CONSISTENCY WITH APPLICABLE GHG REDUCTION ACTIONS IN 2017 SCOPING PLAN UPDATE

Sector / Source	Category / Description	Consistency Analysis
Mobile Sources (cont.)		
SB 375	SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. CARB's current targets call for the Bay Area to reduce per-capita vehicular GHG emissions 10 percent by 2020 and 19 percent by 2035 from a 2005 baseline.	Consistent. Development under the Plan-Wide Amendments would be consistent with MTC and ABAG Plan Bay Area 2040 goals and objectives under SB 375 to implement "smart growth." The DTPP Plan-Wide Amendments propose development in an infill location well served by public transportation which would reduce reliance on automobiles, thereby reducing VMT and associated GHG emissions. The Countywide average is estimated to be 12.3 miles per resident and 17.6 miles per employee. Based on the C/CAG-VTA model and after accounting for trip reductions due to the City's mandatory TDM ordinance, development allowed by the DTPP Plan-Wide Amendments would result in 7.8 miles per resident and 15.0 miles per employee. While the residential VMT generated per capita with the proposed DTPP Plan-Wide Amendments is projected to be less than 85 percent of the countywide average, the commercial VMT per capita would be at 85 percent of the countywide average.
Solid Waste		
California Integrated Waste Management Act (IWMA) of 1989 and AB 341	IWMA requires all California cities to divert 50-percent of all solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020.	Consistent. Recology San Mateo County is under contract with the City to provide solid waste and residential recycling services to Redwood City and is responsible for recycling and solid waste management in the City. Recology's services yield waste diversion results consistent with citywide recycling targets. These services would be supplied to all future development under the proposed DTPP Plan-Wide Amendments. Consistent with AB 341 - Commercial Recycling and AB 1826 - Commercial Organics, all commercial, business, and multifamily establishments that generate enough solid and organic waste are required to have a recycling and/or organics program.

Although the proposed DTPP Plan-Wide Amendments would not meet the EO B-55-13 target of carbon neutrality by 2045, carbon neutrality is not a significance threshold for the purposes of this SEIR because carbon neutrality is not an adopted plan, policy, or regulation of the State that is applicable to the City. In fact, the 2017 Scoping Plan Update explicitly acknowledges and states that the inability to achieve carbon neutrality or net zero GHG emissions does not imply that a project contributes to a significant impact under CEQA:⁷¹

Achieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in

⁷¹ CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017. Available online: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 30, 2022.

a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.

As illustrated in Table 13-4, with adoption of Mitigation Measure CC-1, the DTPP Plan-Wide Amendments would largely align with the 2017 Scoping Plan Update. Thus, the proposed DTPP Plan-Wide Amendments would not substantially conflict with achieving the SB 32 target or with making progress toward achieving the 2050 reductions included in EO S-3-05. The proposed DTPP Plan-Wide Amendments would make progress towards carbon neutrality; however, the amendments' inability to achieve carbon neutrality by 2045 does not conflict with the 2017 Scoping Plan, and thus does not render the impact significant under CEQA.

Plan Bay Area 2040

Pursuant to SB 375, ABAG and the MTC adopted *Plan Bay Area 2040* to establish targets and strategies for meeting the region's needs for housing at all income levels, while reducing GHG emissions by private passenger cars and light-duty truck traffic. The core strategy of *Plan Bay Area 2040* is to encourage growth in existing communities along the existing transportation network, focusing new development in PDAs and TPAs in urbanized centers where more public transit and other mobility options are available to reduce the use of cars and light trucks. In addition to encouraging focused growth through significant transit and roadway performance investments, *Plan Bay Area 2040* directs funding to neighborhood active-transportation and complete-streets projects, climate initiatives, lifeline transportation and access initiatives, pedestrian and bicycle safety programs, and PDA planning.

The DTPP Plan-Wide Amendments would locate high density, mixed-use development of land uses in an infill location close to transit. Locating a mix of land uses including residential, office, and retail uses in an area well served by transit services would reduce the number of vehicle trips and VMT generated. The amended DTPP area is also located in a Priority Development Area and Transit Priority Area well served by transit facilities including the Redwood City Station, a regional Caltrain station and SamTrans, which provides bus and shuttle services from the Redwood City station as well along El Camino Real and other streets in the amended DTPP area (see Figure 9-2 in Chapter 9, *Transportation and Circulation*). As discussed under Impact CC-1, development allowed by the DTPP Plan-Wide Amendments would generate at least 10 percent fewer miles per capita when compared to the countywide average. Therefore, the proposed DTPP Plan-Wide Amendments are consistent with *Plan Bay Area 2040*, as well as its successor plan, *Plan Bay Area 2050*.

Redwood City Climate Action Plan

The Redwood City Climate Action Plan prescribes programs and policies that give Redwood City a viable path towards reducing GHG emissions that, combined with emissions reductions resulting from state and regional policies, will meet the State's GHG reduction goals. The analysis presented below discusses consistency of the proposed DTPP Plan-Wide Amendments with measures in three primary sectors the Climate Action Plan relies on to achieve this target:

- **Energy and Water:** Measures in the Climate Action Plan that relate to energy and water use address the Redwood City General Plan's goal (NR-4) to maximize energy conservation and

renewable energy production to reduce consumption of natural resources and fossil fuels and goal NR-2 to reduce water consumption through aggressive implementation of conservation policies and programs. The Climate Action Plan relies on energy use in buildings and facilities to provide the greatest opportunity for affordable emissions reductions. Measures focus on reducing energy use by implementing energy efficiency programs while transitioning towards electricity generated from low-carbon fuels and renewable resources. Consistent with these measures, development in the proposed DTPP Plan-Wide Amendments would be subject to energy efficiency standards in the most recent update to Title 24 standards and include all-electric construction, provide onsite solar generation and EV charging infrastructure as required by the City Reach Codes. In addition, future projects would be served by PCE, that provides electricity with at least 50 percent and up to 100 percent from renewable resources. Future businesses in the amended DTPP area would have the option to participate in the City's Green Business Program. All development proposed pursuant to the DTPP Plan-Wide Amendments would be subject to the City's Recycled Water Use Ordinance and the Water Efficient Landscape Ordinance that help reduce water use. Future residential uses can also participate in the City's residential water conservation rebate programs for high efficiency appliances and drought tolerant landscapes. Therefore, development allowed by the DTPP Plan-Wide Amendments would be consistent with these measures in the Climate Action Plan.

- **Transportation and Land Use:** Measures in the Climate Action Plan that relate to transportation and land use address the General Plan's goal (BE-31) to encourage development and implementation of strategies that minimize vehicle trips and vehicle miles traveled. Measures aim to continue smart growth policy that prioritizes infill, higher-density, transportation-oriented and mixed-use development focusing on PDAs. The proposed DTPP Plan-Wide Amendments provide for infill, high-density, mixed-use development located in a PDA and TPA and would therefore be consistent with the Climate Action Plan. The development within the DTPP area will also be subject to the City's TDM ordinance which will help reduce single-occupancy vehicle trips. The DTPP Plan-Wide Amendments also enhance the circulation network to facilitate pedestrian and bicycle trips and encourage use of public transit. The DTPP Plan-Wide Amendments also reduce parking requirements which will further reduce dependence on vehicular trips.
- **Solid Waste:** Measures in the Climate Action Plan that relate to solid waste address the General Plan's goal (BE-45) to minimize the volume of solid waste that enters regional landfills. To meet the State's solid waste diversion mandates for local jurisdictions, the Climate Action Plan includes measures requiring the City to raise the diversion rate over time by implementing zero waste policies and programs for municipal operations as well as communitywide waste reduction, recycling, and diversion. Programs include implementation of the disposable food ware ordinance and food recovery programs, commercial recycling requirements and other measures such as yard waste ordinances, pay-as-you-throw tiered rate structures, and community outreach programs such as the Zero Waste Party Pack program. Future development under the proposed DTPP Plan-Wide Amendments would be subject to these programs and policies and would therefore be consistent with these measures in the Climate Action Plan. (See Chapter 10, *Utilities and Infrastructure*, for more information regarding solid waste.)

CALGreen Code and City of Redwood City Reach Codes

Development allowed by the DTPP Plan-Wide Amendments would be required to comply with the most recent update to the CALGreen Code. All development in the amended DTPP area would also be required to comply with the City's Reach Codes that aim to achieve energy savings

and GHG reductions beyond the state’s minimum requirements. In addition, Mitigation Measure CC-1 would require projects to comply with Tier 2 EV charging requirements in the City’s Reach Codes or the applicable CALGreen code, whichever is more restrictive.

Conclusion

The DTPP Plan-Wide Amendments would result in a new significant impact not identified in the DTPP Final EIR because that document did not explicitly analyze consistency of the DTPP with GHG reduction plans, policies, and regulations. However, with implementation of new Mitigation Measure CC-1, the proposed DTPP Plan-Wide Amendments would not conflict with the City and region’s progress towards achieving GHG reduction targets established by Executive Order S-3-05, and SB 32, or the reduction measures identified in CARB’s 2017 Scoping Plan. The proposed DTPP Plan-Wide Amendments would also not conflict with Plan Bay Area or the Redwood City Climate Action Plan, and would be subject to measures in the CALGreen Code and the Redwood City Reach Codes.

Mitigation: Implement Mitigation Measure CC-1.

Significance After Mitigation: With the implementation of Mitigation Measure CC-1, GHG emissions from subsequent projects proposed for development within the amended DTPP area would be reduced to the extent feasible. However, as explained above under Impact CC-1, the City Council in 2020 adopted the Redwood City Reach Codes, which permit certain exceptions to prohibitions on the use of natural gas, as local policy following staff’s extensive outreach, consideration of other examples, and public input. Therefore, this SEIR considers that the full implementation of all-electric building development may not be feasible because projects may qualify for exceptions to the all-electric requirements, and, as a result, Impact CC-2 is, conservatively considered to be ***significant and unavoidable with mitigation***. (New significant and unavoidable impact compared to DTPP Final EIR.)

Impact CC-3: Implementation of the proposed DTPP Plan-Wide Amendments would not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (*Less than Significant*)

DTPP Impact Summary

Significance criteria for energy use were introduced to Appendix G of the CEQA Guidelines in 2018. Therefore, the DTPP Final EIR did not include an assessment of the DTPP’s impacts with respect to wasteful, inefficient or unnecessary energy use or consistency with state or local plans for renewable energy or energy efficiency.

Project Impacts

Implementation of the proposed DTPP Plan-Wide Amendments would result in the development in the area which would increase energy consumption during both construction and operation. During construction, energy would be consumed to power construction equipment as well as

vehicles transporting workers, materials and equipment to and from construction sites. Operational energy use would primarily include building energy use and transportation use, with a smaller contribution from area sources.

Construction Equipment and Vehicles

Energy use during future construction of projects, including any required off-site utility improvements, would primarily occur in association with fuel use in construction equipment and vehicles. Energy use would vary throughout the construction period of projects based on the construction activities being performed and would cease upon completion of construction. Fuels used for construction would typically include diesel and gasoline; use of natural gas and electricity would be minimal.

Heavy-duty equipment used for construction activities, including both building excavation and construction as well as utility work, associated with development allowed by the proposed DTPP Plan-Wide Amendments would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the individual construction sites and haul trucks exporting demolition material or other materials off site. Construction workers travel to and from each construction site would be in light-duty vehicles which are primarily gasoline-powered. Alternative-fueled vehicles powered by natural gas, hydrogen fuel cell and electricity form a small percentage of the current fleet, but are likely to increase in the future.

All development allowed by the DTPP Plan-Wide Amendments would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements.

Construction activities would use fuel-efficient equipment and on-road vehicles consistent with federal and state regulations, such as fuel efficiency regulations in CARB's Pavley Phase II standards for light-duty vehicles like worker commutes and vendor vehicles; the anti-idling regulation in 13 CCR Section 2485; and fuel requirements for stationary equipment in 17 CCR Section 93115 (concerning the Airborne Toxic Control Measures). In accordance with 13 CCR Sections 2485 and 2449, idling by commercial vehicles over 10,000 pounds and off-road equipment over 25 horsepower would be limited to a maximum of five minutes. The intent of these regulations is to reduce construction emissions; however, compliance with the anti-idling and emission reduction regulations discussed above would also result in fuel savings from the more efficient use of equipment.

The use of diesel, gasoline and other alternative fuels for construction activities would be temporary and constitute a small fraction of the regional usage; therefore, the construction energy demand of

the DTPP Plan-Wide Amendments would be within the supply and infrastructure service capabilities of PG&E and PCE and would not require additional local or regional capacity.

Overall, construction activities that attributable to implementation of the proposed DTPP Plan-Wide Amendments would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, the proposed DTPP Plan-Wide Amendments would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction.

Operational Building Efficiency

Buildings constructed as part of subsequent projects in the amended DTPP area would require electricity for building operation (e.g., appliances, lighting, heating and air conditioning, water heating and cooking). As discussed earlier, per the City's Reach Codes, all proposed development allowed by the DTPP Plan-Wide Amendments would be required to be all-electric with no natural gas infrastructure, which eliminates natural gas usage onsite. While this would increase the electricity use associated with the development as compared to development with both electricity and natural gas usage, the increasing percentage of electricity from renewable sources provided by PG&E and PCE in response to RPS standards would result in a transition from the use of non-renewable energy to cleaner, renewable energy sources (see RPS program described above in Section 13.1, *Regulatory Setting*). Provision of EV charging infrastructure as required by the City's Reach Codes would also increase electricity use. The Reach Codes also include onsite photovoltaic requirements for residential and commercial developments which encourage use of renewable solar energy and reduce reliance on the grid.

Prior to development of subsequent projects, applicants would be required to ensure that proposed development would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Title 24 reduces energy use in residential and commercial buildings through progressive updates to both the Green Building Standards Code (Title 24, Part 11) and the Energy Efficiency Standards (Title 24, Part 6). Title 24 standards are updated periodically (every 3 years). Provisions added to Title 24 over the years include consideration and incorporation of new energy efficiency technologies and methods for building features such as space conditioning, water heating, and lighting, as well as construction waste diversion goals. Additionally, some standards focus on larger energy-saving concepts such as reducing loads at peak periods and seasons, improving the quality of energy-saving installations, and performing energy system inspections.

Past updates to the Title 24 standards have proven very effective in reducing building energy use; the 2013 update to the energy efficiency standards was estimated to reduce energy consumption in residential buildings by 25 percent relative to the 2008 standards.⁷² The current 2019 Title 24 standards further reduce energy use compared to the 2016 standards, with single-family residential

⁷² California Energy Commission (CEC). 2012. Energy Commission Approves More Efficient Buildings for California's Future. Available online: <https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C17.pdf>. Accessed January 28, 2022.

savings of 79 percent for electricity and 9 percent for natural gas. For low-rise multi-family buildings, savings are 79 percent for electricity and 5 percent for natural gas by requiring photovoltaic systems for new low-rise residential buildings under three stories.⁷³ The 2022 Update to the Title 24 standards is expected to reduce electricity and fossil fuel natural gas usage when compared to continued compliance with the 2019 requirements. Under the 2022 Update, energy use in buildings in California is expected to decrease by 0.5 percent over the 2019 standards. On a statewide basis in 2023, all measures for newly constructed buildings and altered components of existing buildings collectively would save approximately 33 million therms of fossil fuel natural gas and 1.3 billion kWh of electricity.

Implementation of development allowed by the DTPP Plan-Wide Amendments would occur over a period of at least several years during which future triennial updates to Title 24 standards would take place. Thus, further energy use reductions beyond the current 2019 standards can be anticipated from future Title 24 code revision cycles, as building permits are issued at future dates corresponding to those code updates. Goals and policies encouraged by the City, including those set forth in the City's General Plan also support increased energy conservation in new development, such as that in the amended DTPP area. These requirements would decrease the amount of energy required for building operation and ensure that building energy use related to development allowed by the DTPP Plan-Wide Amendments would not be inefficient or wasteful.

In addition, as part of the RPS program described above in Section 13.1, *Regulatory Setting*, electric utilities including investor-owned utilities and community choice aggregators are required to increase the percentage of electricity provided from eligible renewable resources. Though the RPS program does not necessarily increase energy efficiency, implementation of this program reduces the use of non-renewable energy sources such as natural gas and coal. The legislation requires utilities to increase the percentage of electricity obtained from eligible renewable sources to 50 percent by 2030. SB 100 furthered these standards to require electric utilities to procure eligible renewable electricity for 44 percent of retail sales by 2024, 52 percent by 2027, and 60 percent by December 2030. SB 100 also specifies that CARB plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. CPUC and the CEC jointly implement the RPS program and PG&E and PCE, the electric utility providers to the City of Redwood City, are required to adhere to these standards and deadlines. Therefore, subsequent development allowed by the proposed DTPP Plan-Wide Amendments would be consistent with these regulations.

Transportation

Vehicle trips generated by subsequent development within the amended DTPP area would increase use of transportation fuels, primarily gasoline and diesel but also electricity for electric vehicles. Enhanced fuel economies realized pursuant to federal and state regulatory actions such as increasingly stringent CAFE/Pavley standards for vehicle fuel efficiency, and transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells)

⁷³ CEC. 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, December 2018. Available online: https://www.energy.ca.gov/sites/default/files/2021-06/CEC-400-2018-020-CMF_0.pdf. Accessed January 30, 2022.

would decrease future gasoline fuel demands per VMT but would increase demand for alternative fuels. Provision of EV charging infrastructure as required by Mitigation Measure CC-1 would increase transportation-related electricity use. However, as discussed under Impact CC-1 above and in Chapter 9, *Transportation and Circulation*, the location of the amended DTPP area in an area well served by transit facilities reduces VMT within the region, acting to also reduce regional vehicle energy demands. Therefore, transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and the proposed DTPP Plan-Wide Amendments would be consistent with regulations to reduce transportation energy use.

Conclusion

Considering the factors and requirements described above, energy use associated with the construction and operation of development allowed by the DTPP Plan-Wide Amendments would not be considered unnecessary and wasteful and would be consistent with all applicable plans, policies and regulations developed to encourage energy conservation and renewable energy use. Therefore, the DTPP Plan-Wide Amendments would not result in new or more severe impacts than what was previously identified in the DTPP Final EIR. This impact would be *less than significant*.

Though this would be a less than significant impact, Mitigation Measure CC-1 identified under Impact CC-1, would increase the amount of renewable energy used by development under the proposed DTPP Plan-Wide Amendments by reducing the consumption of non-renewable fuels such as natural gas in buildings and petroleum-based transportation fuels. The City's Reach Codes requirement for on-site alternative energy generation would also offset energy use to some extent.

In addition, Mitigation Measure AQ-2b, presented in Chapter 12, *Air Quality*, requires the use of cleaner construction equipment meeting the U.S. EPA's Tier 4 Final standards if subsequent projects proposed as part of the DTPP Plan-Wide Amendments are found to generate construction emissions in excess of the BAAQMD's project-level construction thresholds. Over time, the construction equipment fleet would include a greater percentage of newer equipment meeting the Tier 4 Final standards. Newer equipment would also be more energy efficient when compared to older equipment because of advancement in technology to not just reduce emissions, but also reduce fuel use. This would further reduce energy use during construction.

Mitigation: None required.

Impact CC-4: Implementation of the proposed DTPP Plan-Wide Amendments would not exacerbate effects of sea level rise. (*Less than Significant*)

DTPP Impact Summary

The DTPP Final EIR identified potential flooding due to sea level rise as a potentially significant impact, and Mitigation Measure 13-1 was introduced to assist in preparation of response strategies that address sea level rise and increased flooding. The DTPP Final EIR further

concluded that, given the uncertainty surrounding climate change, Mitigation Measure 13-1 would not reduce this potential impact to a less-than-significant level, and impacts related to flooding caused by sea level rise would remain significant and unavoidable.

However, in 2015 the California Supreme Court's decision in California Building Industry Association (CBIA) v. Bay Area Air Quality Management District confirmed that CEQA is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Consequently, the sea level rise assessment in this SEIR focuses on whether the proposed DTPP Plan-Wide Amendments would exacerbate effects of sea level rise.

Project Impacts

Implementation of the proposed DTPP Plan-Wide Amendments would allow development of new residential and office uses in the amended DTPP area. While construction activities associated with future developments would generate GHG emissions, all future developments would be consistent with the City's GHG reduction goals and would be substantially consistent with the BAAQMD's adopted thresholds for GHGs (BAAQMD, 2022). Subsequent development projects would use no natural gas in residential and non-residential buildings, except as permitted by the limited exceptions available under the City's Reach Codes, and would provide EV charging infrastructure in compliance with the City's Reach Codes or CALGreen Tier 2 requirements, whichever is more restrictive. The VMT per capita associated with the proposed DTPP Plan-Wide Amendments must also meet a 15 percent reduction below the regional average. With implementation of Mitigation Measure CC-1, the proposed DTPP Plan-Wide Amendments would result in an increase in GHG emissions that is not cumulatively considerable, and thus would not exacerbate sea level rise. Also see Chapter 10, *Utilities and Infrastructure*, for an analysis of potential flood hazards, which would be less than significant. For these reasons, the proposed DTPP Plan-Wide Amendments would not exacerbate effects of sea level rise and would not result in new or more severe impacts than what was identified in the DTPP Final EIR. Therefore, this impact would be ***less than significant***, and no mitigation is required.

Mitigation: None required.

13.4 References

Bay Area Air Quality Management District (BAAQMD). 2017a. 2017 Final Clean Air Plan, April 19, 2017. Available online: https://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 January 30, 2022.

BAAQMD. 2017b. California Environmental Quality Act Air Quality Guidelines, May 2017. Available online: https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Accessed January 03, 2022.

- BAAQMD, 2022. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Change Impacts from Land Use Projects and Plans, April 2022. Available at: https://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa-thresholds-2022/justification-report-pdf.pdf?la=en. Accessed April 2022.
- Cal Adapt, 2022. Annual Average. Available online: <https://cal-adapt.org/tools/annual-averages>. Accessed February 23, 2022.
- California Air Pollution Control Officers Association (CAPCOA). 2008. CEQA & Climate Change, January 2008. Available online: <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf>. Accessed January 30, 2022.
- California Air Resources Board (CARB). 2007. California Greenhouse Gas Inventory - By IPCC Category, last updated November 19, 2007. Available online: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ghg_inventory_ipcc_all_90-04_AR4.pdf. Accessed January 30, 2022.
- CARB. 2008. Climate Change Scoping Plan: A Framework for Change, December 2008. Available online: https://ww3.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed January 13, 2022.
- CARB. 2016. Mobile Source Strategy, May 2016. Available online: <https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>. Accessed January 30, 2022.
- CARB. 2017. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017. Available online: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed January 30, 2022.
- CARB. 2018a. Resolution 18-12: Proposed Update to Senate Bill 375 Greenhouse Gas Emissions Reduction Targets, March 22, 2018. Available online: <https://ww3.arb.ca.gov/board/res/2018/res18-12.pdf>. Accessed May 2020.
- CARB. 2018b. *SB 375 Regional Greenhouse Gas Emissions Reduction Targets, March 2018*. Available online: <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. Accessed January 27, 2022.
- CARB. 2021a. California Greenhouse Gas Emissions for 2000–2019 – Trends of Emissions and Other Indicators, July 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ca_ghg_inventory_trends_2000-2019.pdf. Accessed January 30, 2022.
- CARB. 2021b. 2020 Mobile Source Strategy, October 28, 2021. Available online: https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf. Accessed on January 30, 2022.
- CARB. 2022. GHG Global Warming Potentials. Available online: <https://ww2.arb.ca.gov/ghg-gwps>. Accessed January 30, 2022.
- California Building Standards Commission (CBSC). 2019. *Guide to the 2016 California Green Building Standards Code Nonresidential*. November 2019. Available online: <https://cdn-codes-pdf.iccsafe.org/uploads/bookpdfs/Guide%20to%202019%20CALGreen%20Build%20Stand%20NonRes.pdf>. Accessed January 27, 2022.

- California Department of Finance (CDF). 2022a. E-4 Historical Population Estimates for Cities, Counties, 2022. Available online: <https://www.dof.ca.gov/Forecasting/Demographics/Estimates/>. Accessed January 30, 2022.
- CDF. 2022b. Gross State Product, 2022. Available online: https://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/. Accessed January 30, 2022.
- California Department of Food and Agriculture (CDFA). 2020. California Agricultural Statistics Review, 2020. Available online: https://www.cdfa.ca.gov/Statistics/PDFs/2020_Ag_Stats_Review.pdf. Accessed January 30, 2022.
- California Department of Resources Recycling and Recovery (CDRRR). 2021. *California's 75 Percent Initiative Defining the Future*, Last updated December 28, 2021. Available online: <https://www.calrecycle.ca.gov/75percent>. Accessed January 20, 2022.
- California Department of Tax and Fee Administration (CDTFA). 2022a. MVF 10 Year Report. Available online: <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>. Accessed on January 27, 2022.
- CDTFA. 2022b. Taxable Diesel Gallons 10 Year Report. Available online: <https://www.cdtfa.ca.gov/taxes-and-fees/spftrpts.htm>. Accessed on January 27, 2022.
- California Energy Commission (CEC). 2012. Energy Commission Approves More Efficient Buildings for California's Future. Available online: <https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/C17.pdf>. Accessed January 28, 2022.
- CEC. 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, December 2018. Available online: https://www.energy.ca.gov/sites/default/files/2021-06/CEC-400-2018-020-CMF_0.pdf. Accessed January 30, 2022.
- CEC. 2020. 2020 California Annual Retail Fuel Outlet Report Results (CEC-A15). August 31, 2020. Available online: <https://www.energy.ca.gov/media/3874>. Accessed January 27, 2022.
- CEC. 2021. 2022 Energy Code Update Rulemaking, November 22, 2021. Available online: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed January 30 2022.
- CEC. 2022a. 2020 Total System Electric Generation. Available online: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation>. Accessed on January 27, 2022.
- CEC. 2022b. California Energy Consumption Database. Available online: <https://ecdms.energy.ca.gov/>. Accessed January 27, 2022.
- California Housing and Community Development. n.d. 2022 CALGreen, no date. Available online: <https://catc.ca.gov/-/media/ctc-media/documents/ctc-meetings/2021/2021-04/tab-2-hcd-pres-a11y.pdf>. Accessed January 30, 2022.
- California Natural Resources Agency (CNRA). 2009. 2009 California Climate Adaptation Strategy – A Report to the Governor of the State of California in Response to Executive

- Order S-13-2008, 2009. Available online: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Statewide_Adaptation_Strategy.pdf. Accessed January 30, 2022.
- CNRA. 2014. Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy, July 2014. Available online: https://resources.ca.gov/CNRALegacyFiles/docs/climate/Final_Safeguarding_CA_Plan_July_31_2014.pdf. Accessed January 30, 2022.
- CNRA. 2016. *Safeguarding California: Implementation Action Plans*, March 2016. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/Safeguarding%20California-Implementation%20Action%20Plans.pdf>. Accessed January 30, 2022.
- CNRA. 2018. *Safeguarding California Plan: 2018 Update*, January 2018. Available online: <https://resources.ca.gov/CNRALegacyFiles/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed January 30, 2022.
- City of Redwood City, 2010. Redwood City General Plan – Public Safety Element, October 11, 2010. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/5109/635782756603530000>, accessed February 3, 2022.
- City of Redwood City. 2020a. Climate Action Plan. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/22781/637426822669070000>. Accessed February 23, 2022.
- City of Redwood City, 2020b. Ordinance 2487 – An Ordinance of the City of Redwood City Adding Article XV of Chapter 9 of the Redwood City Code to Adopt Local Amendments to 2019 Edition of the California Energy Code and Green Building Standards Codes, Together with Certain Amendments, Exceptions, Modifications and Additions Thereto, September 21, 2020. Available online: <https://www.redwoodcity.org/home/showpublisheddocument/23035/637473438954470000>, accessed February 3, 2022.
- City of Redwood City, 2022. Energy. Available online: <https://www.redwoodcity.org/departments/public-works/environmental-initiatives/energy-initiatives>. Accessed February 23, 2022.
- Climate Central. 2022. U.S. Temperatures and Billion-Dollar Disasters, January 10, 2022. Available online: <https://medialibrary.climatecentral.org/resources/us-temps-billion-dollar-disasters>. Accessed January 30, 2022.
- Cook et al. 2016. Consensus on consensus: a synthesis of consensus estimates on human-caused global warming, *Environmental Research Letters* Vol. 11 No. 4, DOI:10.1088/1748-9326/11/4/048002, April 13, 2016. Available online: <https://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002/pdf>. Accessed January 30, 2022.
- Intergovernmental Panel on Climate Change (IPCC). 2014. *Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.), Geneva, Switzerland: IPCC, 151 pp, 2014. Available online: https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf. Accessed January 30, 2022.

- Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG). 2013. Bay Area Plan – Strategy for A Sustainable Region, July 13, 2013. Available online: http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/Plan_Bay_Area.pdf. Accessed on January 30, 2022.
- MTC & ABAG. 2017. Plan Bay Area 2040. Adopted July 26, 2017. Available online: https://mtc.ca.gov/sites/default/files/Final_Plan_Bay_Area_2040.pdf. Accessed January 27, 2022.
- MTC & ABAG. 2021. Plan Bay Area 2050, Adopted October 21, 2021. Available online: https://planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf. Accessed January 28, 2022.
- National Oceanic and Atmospheric Association (NOAA). 2019. Assessing the US Climate in 2018, published February 6, 2019. Available online: <https://www.ncei.noaa.gov/news/national-climate-201812>. Accessed January 30, 2022.
- NOAA. 2021. Climate Change: Global Sea Level, Last updated December 21, 2021. Available online: <https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level>. Accessed January 30, 2022.
- NOAA. 2022. NOAA Wildfires/ FIREX Fact Sheet – The Impact of Wildfires on Climate and Air Quality, no date. Available online: <https://csl.noaa.gov/factsheets/csdWildfires/FIREX.pdf>. Accessed January 30, 2022.
- Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018. Available online: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed January 30, 2022.
- OPR, California Energy Commission (CEC), California Natural Resources Agency (CNRA). 2018. California’s Fourth Climate Change Assessment: Statewide Summary Report, August 2018. Available online: https://www.energy.ca.gov/sites/default/files/2019-11/Statewide_Reports-SUM-CCCA4-2018-013_Statewide_Summary_Report_ADA.pdf. Accessed January 30, 2022.
- Pacific Gas and Electric Company (PG&E). 2022a. Company Profile. Available online: https://www.pge.com/en_US/about-pge/company-information/profile/profile.page. Accessed January 27, 2022.
- PG&E. 2022b. PG&E 2020 Power Content label. Available online: <https://www.energy.ca.gov/filebrowser/download/3882>. Accessed on January 27, 2022.
- Red Cross Red Crescent Climate Centre (RCCC). 2019. Heatwave Guide for Cities, July 2019. Available online: <https://www.climatecentre.org/downloads/files/IFRCGeneva/RCCC%20Heatwave%20Guide%202019%20A4%20RR%20ONLINE%20copy.pdf>. Accessed January 30, 2022.
- United States Energy Information Administration (USEIA). 2021. California State Profile and Energy Estimates – Profile Analysis, last updated February 18, 2021. Available online: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed January 27, 2022.

- USEIA. 2022. California State Profile and Energy Estimates. Last updated January 20, 2022. Available online: <https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures>. Accessed January 27, 2022.
- United States Environmental Protection Agency (USEPA). 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2019, April 14, 2021. Available online: <https://www.epa.gov/sites/default/files/2021-04/documents/us-ghg-inventory-2021-main-text.pdf?VersionId=uuA7i8WoMDBOc0M4ln8WVXMgn1GkujvD>. Accessed January 30, 2022.
- USEPA and National Highway Traffic Safety Administration (NHTSA). 2010. *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule*, May 7, 2010. Available online: <https://www.govinfo.gov/content/pkg/FR-2010-05-07/pdf/2010-8159.pdf>. Accessed January 30, 2022.
- USEPA and NHTSA. 2019. One National Program Rule on Federal Preemption of State Fuel Economy Standards. Available online: <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100XI4W.pdf>. Accessed January 27, 2022.
- Westerling, Anthony LeRoy. 2018. Wildfire Simulations for the Fourth California Climate Assessment: Projecting Changes in Extreme Wildfire Events with a Warming Climate, Publication no. CCA4-CEC-2018-014, August 2018. Available online: https://www.energy.ca.gov/sites/default/files/2019-11/Projections_CCA4-CEC-2018-014_ADA.pdf. Accessed January 30, 2022.

This page intentionally left blank

CHAPTER 14

Hazards and Hazardous Materials

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on hazards and hazardous materials, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Impacts related to transporting, routine use and disposal of, and accidental release of hazardous materials were discussed and analyzed in the DTPP Final EIR, including the handling of hazardous materials within one-quarter mile of a school, and found to be less-than-significant. As explained in the DTPP Final EIR, future residential, retail, and office developments may require the transport, use, or disposal of hazardous materials, either during construction or during operations. However, all aspects of handling of hazardous materials are heavily regulated under federal, state, and local laws. Potential impacts associated with these hazards were found to be adequately addressed by existing laws, regulations, and policies, and mitigation was not required.

Exposure to existing hazardous materials contamination was analyzed in the DTPP Final EIR and was also identified as a less-than-significant impact. The DTPP Final EIR concluded that due to the large number of contaminated sites in the vicinity, there is the possibility for future construction activities to expose contamination to construction personnel, the public, and the environment. The DTPP Final EIR further concluded that the existing laws and regulations, of which compliance is required, would adequately address the potential impacts related to exposing people and the environment to contamination. No mitigation was required.

Impacts related to the potential exposure to asbestos-containing materials (ACM), polychlorinated biphenyls (PCBs), and lead-based paint (LBP) were analyzed in the DTPP Final EIR, and all were determined to be less-than-significant impacts. Similar to other hazardous materials-related impacts, these hazardous building materials are also regulated by federal, state, and local laws. The DTPP Final EIR concluded that the existing laws and regulations, of which compliance is required, would adequately address the potential impacts related to exposure to hazardous building materials, such as ACM, PCBs, and LBP. No mitigation was required.

Impacts related to consistency with the San Mateo County Comprehensive Airport Land Use Compatibility Plan (ALUCP) were analyzed in the DTPP Final EIR and were determined to be less than significant. The DTPP Final EIR determined that the existing building height requirements were within the designated parameters and that existing regulations adequately mitigate any potential hazards. No mitigation was required.

14.1 Environmental Setting

14.1.1 Hazardous Materials Database Records Search

The DTPP Final EIR identified a number of sites that either used hazardous materials and/or had spills or leaks that were being investigated and remediated. An updated review of the Department of Toxic Substances Control (DTSC) EnviroStor database and the State Water Resources Control Board (SWRCB) GeoTracker database revealed that there are numerous documented hazardous materials sites within the City of Redwood City, as well as within the proposed DTPP Plan-Wide Amendments boundary.^{1,2} As of April 5, 2022, there was one active Cleanup Program Site, two closed leaking underground storage tank (LUST) sites, and one Permitted Underground Storage Tank (UST) within the amended DTPP area.³ The active and evaluation sites are undergoing investigation and cleanup. The closed sites have been investigated and remediated, and the overseeing regulatory agency has concluded those sites no longer pose a risk to people or the surrounding properties. Note that closed sites may still have residual contamination that is below regulatory action levels at that time for the land use at that property at that time. Regulatory actions are periodically updated and land uses can change over time.

14.1.2 Schools

There are two schools in proximity to the amended DTPP area: Sequoia High School at 1201 Brewster Avenue (approximately 0.13-mile south of the DTPP Plan-Wide Amendments boundary) and McKinley Institute of Technology at 400 Duane Street (approximately 0.45 mile west of the amended DTPP area boundary).

14.1.3 Airports

The San Carlos Airport is approximately 1.4 miles northwest of the amended DTPP area.

14.1.4 Wildfire Hazards

According to the maps published California Department of Forestry and Fire Protection (CAL FIRE) Forest Resource Assessment Program (FRAP), a majority of the City of Redwood City is not mapped within a Very High Fire Hazard Severity Zone (VHFHSZ). A small portion of the city's limits, in the Emerald Hills area, has been mapped as a VHFHSZ⁴ and is not proximate to the amended DTPP area.

¹ Department of Toxic Substances Control (DTSC), 2022. EnviroStor database. Sites near Redwood City, CA.

² State Water Resources Control Board (SWRCB), 2022. GeoTracker database. Hazardous materials sites near Redwood City, CA.

³ This chapter of the SEIR refers to the "amended DTPP area" to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

⁴ California Department of Forestry and Fire Protection (CAL FIRE), 2008. Draft Fire Hazard Severity Zones in LRA, Redwood City. Fire and Resource Assessment Program. October 2, 2008. Map. Scale 1:250,000.

14.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR (certified in 2011); or contains applicable new information in light of the potential new land use types that may be developed in the DTPP area under the DTPP Plan-Wide Amendments. DTPP EIR Chapter 14, *Hazards and Hazardous Materials*, Section 14.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

14.2.1 National Pollutant Discharge Elimination System

Construction associated with future development within the amended DTPP area would disturb more than one acre of land surface, potentially affecting the quality of stormwater discharges into waters of the United States. Development allowed by the DTPP Plan-Wide Amendments would, therefore, be subject to the National Pollutant Discharge Elimination System (NPDES) *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ).

The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges from construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a risk level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the risk to receiving waters during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could be discharged to receiving water bodies, and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving-waters risk level reflects the risk to receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards
- Good site management “housekeeping”
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from coming into contact with stormwater and moving off-site into receiving waters. The BMPs fall into several categories, including erosion

control, sediment control, waste management, and good housekeeping. They are intended to protect surface water quality by preventing eroded soil and construction-related pollutants from migrating off-site from the construction area. Routine inspection of all BMPs is required under the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff.

Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and washing and fueling of vehicles and equipment. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site after construction).

In the amended DTPP area, the Construction General Permit is implemented and enforced by the San Francisco Bay Regional Water Quality Control Board (RWQCB), which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the San Francisco Bay Regional Water Quality Control Board of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

14.2.2 Hazardous Materials

Hazardous materials use, storage, transportation and disposal are governed by the following regulations, permits and protocols.

Federal

The primary federal agencies with responsibility for hazardous materials include the United States Environmental Protection Agency (US EPA), the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (US DOT).

Under the Resource Conservation and Recovery Act (RCRA), the US EPA regulates the generation, transportation, treatment, storage and disposal of hazardous waste. The Hazardous and Solid Waste Act amended RCRA in 1984. The amendments specifically prohibit the use of certain techniques for the disposal of hazardous waste. The Occupational Safety and Health Act of 1970 (Fed/OSHA) sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries. The US DOT has the regulatory responsibility for the safe transportation of hazardous materials. The US DOT regulations govern all means of transportation except packages shipped by mail (which are governed by the US Postal Service).

Standards and permits at the federal level for hazardous materials use, storage, transportation and disposal include the following: the Toxic Substances Control Act, administered by the US EPA, Regulation 40 CFR, Part 720; the Hazardous Materials Transportation Act, administered by the US DOT, Regulation 49 CFR 171 et seq.; RCRA 42 U.S.C. 6901 et seq.; the Hazardous Waste Management Standards for Generators, Transporters, and Waste Facilities, administered by US EPA, 40 CFR 260 et seq; the Occupation Safety and Health Act, 29 U.S.C. 651; and Workplace Exposure Limits, administered by OSHA. 29 CFR 1900 et seq.

State of California

Primary state agencies with jurisdiction over hazardous chemical materials management are the Department of Toxic Substances Control (DTSC) and the RWQCB. Additional state agencies are also involved in hazardous materials management, including the California Environmental Protection Agency (Cal EPA), The California Division of Labor Occupational Safety and Health (Cal/OSHA, which is part of the Department of Industrial Relations), California Office of Emergency Services (OES), California Air Resources Board (CARB), Bay Area Air Quality Management District (BAAQMD), California Department of Transportation (Caltrans), California Highway Patrol (CHP), State Office of Environmental Health Hazard Assessment (OEHHA) and the California Integrated Waste Management Board (CIWMB).

Hazardous Materials Management

Cal EPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which includes hazardous waste generators, underground and aboveground storage tanks, hazardous materials release response plans and inventories, risk management and prevention programs, Unified Fire Code, and hazardous materials management plans and inventories. The Unified Program is implemented at the local level (see discussion of the local Certified Unified Program Agency, below).

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which includes details of the facility and business conducted at the site; an inventory of hazardous materials that are handled or stored on site; an emergency response plan; and training program for safety and emergency response. The California Hazardous Materials Incident Report System (CHMIRS) provides information regarding spills and other incidents gathered from the California Office of Emergency Services.

The DTSC regulates the generation, transportation, treatment, storage and disposal of hazardous waste. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Laws and regulations require hazardous materials users to store these materials appropriately and to train employees to manage them safely.

Hazardous Materials Transportation

The State has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR, which includes requirements applicable to the transportation of hazardous waste originating in the State and passing through the State. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the CHP and Caltrans.

Occupational Safety

The California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are more stringent than federal OSHA regulations and are presented in CCR Title 8. Standards for workers dealing with hazardous materials include practices for all industries (General Industry Safety Orders); specific practices are described for construction and hazardous waste operations and emergency response. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices. CCR Title 8 also includes standards for the identification, abatement, and handling of asbestos containing materials (8 CCR 1529 and 5208) and lead-based paint (8 CCR 1532.1).

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State OES, which coordinates the responses of other agencies, including Cal EPA, CHP, and the Redwood City Fire Department (RCFD).

Regulations Applicable to R&D Laboratory Uses

The United States Department of Health and Human Services (USDHHS), Centers for Disease Control and Prevention (CDC), and National Institutes of Health (NIH) prescribe containment and handling practices for use in microbiological and biomedical laboratories. Based on the potential for transmitting biological agents, the rate of transmission of these agents, and the quality and concentrations of biological agents produced at a laboratory, Biosafety Levels are defined for four tiers of relative hazards. Biosafety Level 1 (BSL-1) is for the least hazardous biological agents, and Biosafety Level 4 (BSL-4) is for the most hazardous biological agents. Biosafety Levels for infectious agents are based on the characteristics of the agent (virulence,

ability to cause disease, routes of exposure, biological stability and communicability), the quantity and concentration of the agent, the procedures to be followed in the laboratory, and the availability of therapeutic measures and vaccines.

Medical wastes must be managed as a biohazardous material, in accordance with Section 117635 of the California Health and Safety Code. The management of biohazardous materials must comply with USDHHS guidelines and California Department of Public Health (CDPH) regulations pertaining to such materials. Biohazardous medical waste is generally regulated in the same manner as hazardous waste, except that special provisions apply to storage, disinfection, containment and transportation. The CDPH Medical Waste Management Program enforces the Medical Waste Management Act and related regulations.

Pursuant to the federal Atomic Energy Act, which requires states to assume responsibility for the use, transportation, and disposal of low-level radioactive material and for the protection of the public from radiation hazards, the Radiologic Health Branch (RHB) of the CDHS administers the state's Radiation Control Law, which governs the storage, use, transportation, and disposal of sources of ionizing radiation (radioactive material and radiation-producing equipment). Radioactive material regulations require registration of sources of ionizing radiation, licensing of radioactive material, and protection against radiation exposure. The RHB also regulates the transportation of radioactive materials and disposal of radioactive waste. Users of radioactive materials must maintain detailed records regarding the receipt, storage, transfer, and disposal of such materials. State regulations concerning radioactive substances are included in 17 CCR. The regulations specify appropriate use and disposal methods for radioactive substances, as well as worker safety precautions and worker health monitoring programs.

Local

In Redwood City, the San Mateo County Health Department, Environmental Health Services Division is the designated CUPA, and responsible for implementing federal and state laws and regulations pertaining to hazardous materials management, including the Unified Program. As the local CUPA, the County's Environmental Health Division maintains the records regarding location and status of hazardous materials sites in the county, and administers programs that regulate and enforce the transport, use, storage, manufacturing and remediation of hazardous materials. By designating a CUPA, San Mateo County has accurate and adequate information to plan for emergencies and/or disasters, and to plan for public and firefighter safety.

14.3 Impacts and Mitigation Measures

14.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe hazards and hazardous materials impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the DTPP Final EIR certified in 2011.

14.3.2 Significance Criteria

Significance criteria from Appendix G of the 2022 CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- 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; or
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; or
- 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; or
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area; or
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Impacts related to interference with an adopted emergency response or evacuation plan were not evaluated in the Hazards and Hazardous Materials chapter of the DTPP Final EIR; this impact was evaluated in the Public Services chapter. Additionally, impacts related to wildland fires were not addressed in the DTPP Final EIR.

14.3.3 Impacts and Mitigation Measures

Overall, the impacts related to implementation of the DTPP Plan-Wide Amendments are the same as those identified in the DTPP Final EIR. All impacts that were analyzed in the DTPP Final EIR were determined to be less than significant and no mitigation was needed.

Impact HAZ-1: Implementation of the DTPP Plan-Wide Amendments would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

The DTPP Final EIR found that, while the DTPP would result in future developments that may transport, use, or dispose of hazardous materials, the existing federal, state, and local laws and regulations would be sufficient to mitigate any potential hazards. The impacts related to the transport, use, and disposal of hazardous materials would be less than significant and no mitigations were necessary.

This SEIR assumes that the DTPP Plan-Wide Amendments would indirectly result in future development, including new residential, office, and retail spaces. As discussed in the DTPP Final EIR, which contemplated these land use types, all activities associated with handling hazardous materials during future development for these land uses would be subject to the federal, state, and local laws in place to ensure the safe handling (transport, storage, use, and disposal) of hazardous materials.

In addition, the DTPP Plan-Wide Amendments would allow for future development of potential R&D Laboratory uses, which are uses that were not previously envisioned within the DTPP area. While the specific types of R&D Laboratory uses and their tenants are not known at this time, it is assumed in this EIR that these uses could involve the use, manufacturing, storage, or transportation and disposal of biohazardous materials, chemical materials, and/or low-level radioactive materials, in addition to the more common hazardous materials that are associated with standard commercial operations (such as paints, cleaners and solvents).

Section 14.2.2 in the Environmental Setting describes the regulatory framework governing the use, storage, transportation and disposal of hazardous materials, including applicable federal, State and local regulations to which R&D Laboratory uses would be required to adhere. The San Mateo County Health Department, Environmental Health Services Division would enforce the applicable regulations pertaining to safe handling and proper storage of hazardous materials to prevent or reduce potential for injury to health and the environment. If handling of any hazardous materials would be required for the R&D Laboratory uses, such businesses would be required to consult with County Health Department, Environmental Health Services Division, and apply for applicable permits, and register the hazardous through the County's Hazardous Materials Business Plan Program to ensure safe and responsible handling. In addition, compliance with Cal/OSHA worksafe safety standards would ensure worker safety in the handling and use of hazardous materials.

Furthermore, the City requires that building spaces be designed to handle the intended uses, with sprinklers, alarms, vents and secondary containment, in accordance with the guidelines laid out in the City's Fire Code. Compliance with State and local regulations would ensure that buildings are equipped with adequate safety provisions to minimize potential impacts of hazardous materials. Finally, compliance with Caltrans regulations would ensure uses requiring routine transport of hazardous materials would not pose a significant risk to the public or environment.

In summary, Compliance with all applicable federal, state, and local laws would ensure that impacts from development allowed by the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, impacts related to the transport, manufacturing, storage, use, and disposal of hazardous materials would be *less than significant*.

Impact HAZ-2: Implementation of the DTPP Plan-Wide Amendments would not 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. (*Less than Significant*)

The DTPP Final EIR found that, while the DTPP would result in future developments that may transport, use, or dispose of hazardous materials, the existing federal, state, and local laws and regulations would be sufficient to address any potential hazards. These laws are in place to prevent accidental releases and provide response protocols in the event of an accidental release. The impacts related to the accidental release of hazardous materials would be less than significant and no mitigations were necessary. It is assumed that the DTPP Plan-Wide Amendments would indirectly result in future development, such as new residential, office, and retail spaces, in addition to potential R&D Laboratory space. As discussed in the DTPP Final EIR, and further in Impact HAZ-1, above, all activities associated with handling hazardous materials during future development would be subject to the federal, state, and local laws in place to ensure the proper handling of hazardous materials, which would minimize the potential for an accidental release. This would also ensure for prompt and effective cleanup in the potential event that an accidental release would occur. Compliance with all applicable federal, state, and local laws would ensure that impacts from development allowed by the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, impacts related to the accidental release of hazardous materials would be *less than significant*.

Impact HAZ-3: Implementation of the DTPP Plan-Wide Amendments would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant*)

The DTPP Final EIR found that, while the DTPP would result in future developments that may transport, use, or dispose of hazardous materials within one-quarter mile of a school, compliance with existing federal, state, and local laws and regulations would be sufficient to mitigate any potential hazards. As stated above, these laws are intended to regulate the handling and emission of hazardous materials, prevent accidental releases, and provide response protocols in the event of an accidental release; these laws include specific regulations for handling and emitting hazardous materials in the vicinity of a school. For this reason, the impacts related to handling and emitting of hazardous materials within one-quarter mile of a school would be less than significant and no mitigation was necessary.

It is assumed that the DTPP Plan-Wide Amendments would indirectly result in future development, such as new residential, office, and retail spaces, and potential R&D Laboratory space. Future development within the amended DTPP area would require construction and possibly demolition activities, which would require the emission, transport, use, and disposal of hazardous materials within one-quarter mile of a school. As discussed in the DTPP Final EIR, all activities associated with handling hazardous materials during future development would be subject to the federal, state, and local laws in place to ensure the proper handling of hazardous

materials in the event of an accidental release. Compliance with all applicable federal, state, and local laws would ensure that impacts from development allowed by the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, impacts related to the accidental release of hazardous materials would be *less than significant*.

Impact HAZ-4: Implementation of the DTPP Plan-Wide Amendments would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and would not create a significant hazard to the public or the environment. (*Less than Significant*)

The DTPP Final EIR concluded that, due to the numerous existing hazardous materials sites in the area, construction activities associated with future development within the amended DTPP area could expose workers, the public, and/or the environment to contaminated soil and/or groundwater. The DTPP Final EIR further concluded that compliance with existing state and local laws and regulations would adequately address any potential impacts associated with exposure to contaminated soil and/or groundwater and/or hazardous fumes. The DTPP Final EIR determined that the impact would be less than significant, and no mitigation was required.

The DTPP Plan-Wide Amendments would indirectly result in future development, such as new residential, office, and retail spaces, and potential R&D Laboratory space. Future development within the amended DTPP area would require construction and possibly demolition activities, which could expose previously contaminated soil or groundwater. Each site developer would be subject to the same previously discussed state and local laws and any potential impacts from development allowed by the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR. Therefore, impacts related to the exposing people and/or the environment to prior contamination associated with existing hazardous materials sites would be *less than significant*.

Impact HAZ-5: Implementation of the DTPP Plan-Wide Amendments would not result in a safety hazard or excessive noise for people residing or working in the project area. (*Less than Significant*)

The DTPP Final EIR determined that, although a portion of the amended DTPP area would be within the Referral Boundary of the San Carlos ALUCP, it would not exceed any established maximum building height limitations or violate any other established restrictions. The DTPP Final EIR concluded that impacts related to consistency with the San Mateo County ALUCP were less than significant and no mitigation was required.

The DTPP Plan-Wide Amendments would indirectly result in future development, such as new residential, office, and retail spaces, which would not exceed existing maximum building height restrictions. The amended DTPP area is approximately 1.4 miles southeast of the San Carlos

Airport but is not within any noise or safety zones established in the San Mateo County ALUCP. Future development within the amended DTPP area would be designed consistent with the land use restrictions established in the San Mateo County ALUCP. Therefore, development allowed by the DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR, and impacts related to safety and noise hazards associated with airports would be *less than significant*. See Section 10, *Noise and Vibration*, for additional information.

Impact HAZ-6: Implementation of the DTPP Plan-Wide Amendments would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

The DTPP Final EIR determined that, because future development would create additional traffic congestion and could possibly interfere with emergency response or evacuation, the DTPP would create a potentially significant impact as it relates to impairment or interference with an adopted emergency response or evacuation plan. The DTPP Final EIR includes Mitigation Measure 8-1, which would address this impact by providing signal prioritization for emergency vehicles at additional intersections where needed. The DTPP Final EIR concluded that implementation of Mitigation Measure 8-1 would reduce the potential impacts to a less-than-significant level.

Since certification of the DTPP Final EIR, the City has implemented signal prioritization at 15 intersections in the Downtown, including around Fire Station No. 9 on Marshall Street, and at more intersections in the vicinity, effectively implementing Mitigation Measure 8-1. Intersections in the amended DTPP area include:

- Broadway/Charter
- Broadway/Douglas
- Broadway/Marshall-Arguello
- Jefferson/Broadway
- Jefferson/Franklin
- Jefferson/Marshall
- Jefferson/Middlefield
- Main/Marshall-Spring
- Marshall/Hamilton
- Marshall/Winslow
- Middlefield/Marshall
- El Camino Real/Brewster
- El Camino Real/Broadway
- El Camino Real/James
- El Camino Real/Jefferson
- El Camino Real/Maple

Although development allowed by the DTPP Plan-Wide Amendments would increase traffic volumes on roads in the vicinity, this signal prioritization for emergency vehicles combined with the ability of first responders to use vehicle lights and sirens, would mean that the increased volumes would not substantially impair emergency response. In addition, the urban character of the surrounding area, with a grid of local streets providing multiple access and egress routes in event of an emergency, would mean that the increased volumes would not substantially impair emergency evacuation. Impacts of the DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impacts identified in the DTPP Final EIR because DTPP Final EIR

Mitigation Measure 8-1 has already been implemented and the DTPP Plan-Wide Amendments would not add any new traffic signals. Therefore, impacts would be *less than significant*.

Impact HAZ-7: Implementation of the DTPP Plan-Wide Amendments would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (*Less than Significant*)

The DTPP Final EIR did not analyze the impacts on the DTPP as it relates to wildland fires. According to the published CAL FIRE FRAP map of the City of Redwood City, a majority of the city is not within an established VHFHSZ. A small portion of the southwestern extent of the city's limits, in the Emerald Hills area, has been mapped as a VHFHSZ. This area is approximately 1 mile west of the amended DTPP area.

Future developments allowed by the proposed DTPP Plan-Wide Amendments would include construction activities, which would require the use some flammable substances which can be inadvertently ignited. New development may also use flammable substances. However, state and local laws are in effect that are intended to reduce the ignition and spread of wildfire. The amended DTPP area is within an urbanized area of the city and not within an established VHFHSZ or immediately adjacent to a VHFHSZ where associated traffic volumes could affect evacuation routes. For these reasons, the DTPP Plan-Wide Amendments would not result in new impacts and would be *less than significant*.

14.4 References

California Department of Forestry and Fire Protection (CAL FIRE), 2008. Draft Fire Hazard Severity Zones in LRA, Redwood City. Fire and Resource Assessment Program. October 2, 2008. Map. Scale 1:250,000.

Department of Toxic Substances Control (DTSC), 2022. EnviroStor database. Sites near Redwood City, CA.

State Water Resources Control Board (SWRCB), 2022. GeoTracker database. Hazardous materials sites near Redwood City, CA.

This page intentionally left blank

CHAPTER 15

Biological Resources

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on biological resources, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

The DTPP Final EIR found that development in the vicinity of Redwood Creek under the DTPP could harm sensitive salt marsh or aquatic habitat and special-status species that occupy it. This impact was reduced to a less-than-significant level with implementation of Mitigation Measure 15-1, which required consultation with U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) regarding proposed activities to determine how to avoid impacts to special-status species and communities, and adherence to city setback rules for creekside development. Further, Mitigation Measure 15-2 identified permits and approvals from the U.S. Army Corps of Engineers (USACE), CDFW, and the Regional Water Quality Control Board (RWQCB), which reduced impacts on wetlands and waters to a less-than-significant level.

The DTPP Final EIR also found that development in the DTPP area could impact nesting birds and heritage trees. Mitigation Measure 15-3 called for tree removal and trimming, and ground disturbing activities to take place outside of the bird nesting season, or, if this were infeasible, to survey for nests and avoid work around nests with a suitable buffer until nesting was complete. Mitigation Measure 15-4 called for adherence to the Redwood City Tree Preservation Ordinance to ensure protection of heritage trees, and specified planting requirements for replacement trees. With these measures, impacts on nesting birds and heritage trees were reduced to a less-than-significant level.

15.1 Environmental Setting

The amended DTPP area is located in downtown Redwood City (see Figure 3-1), and primarily contains two types of habitat: urban/disturbed and ornamental vegetation.¹ In addition, fragmentary riparian and coastal salt marsh habitats are present adjacent to daylighted segments

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis. Note that no unique biological features were identified in the potential DTPP extension area.

of creeks (open water). Because the amended DTPP area is almost entirely developed with roads, railways, walkways, and structures, it lacks open, undeveloped land. Observed vegetation types, and their associated plant and wildlife species, are described below.

15.1.1 Urban/Disturbed

Urban/disturbed habitat is primarily developed with asphalt, concrete or other impervious surfaces and is dominated by weedy, non-native plant species and wildlife adapted to high levels of disturbance. This is the primary habitat type in the amended DTPP area. Weeds include non-native grasses and other herbaceous plants growing in the margins of developed areas. Wildlife found in this habitat may include house sparrow (*Passer domesticus*), rock dove (*Columba livia*), Brewer's blackbird (*Euphagus cyanocephalus*), house mouse (*Mus musculus*), or other bird or small mammal species adapted to living in urban environments.

15.1.2 Ornamental Vegetation

Ornamental or landscape vegetation is planted by humans along roadsides, in parks, and in public rights-of-way. These areas feature typically introduced exotic species of trees, shrubs and groundcover for decorative value; ruderal, weedy species are also common. This habitat is found in parks and along roadsides in the amended DTPP area. Landscape vegetation may provide cover, food, and nesting resources for wildlife species such as house mouse, California ground squirrel (*Spermophilus beechei*), raccoon (*Procyon lotor*), western fence lizard (*Sceloporus occidentalis*) and migratory birds, such as mourning dove (*Zenaida macroura*), rock dove, Anna's hummingbird (*Calypte anna*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), or house finch (*Haemorhous mexicanus*).

15.1.3 Open Water

Redwood Creek is a perennial creek that flows from the foothills west of the city, through the city and downtown area, into San Francisco Bay. For the majority of its route through the city and amended DTPP area, Redwood Creek flows within underground culverts. Redwood Creek daylighted near the northwest corner of Bradford Street and Main Street, and continues for approximately 500 feet in an open vegetated channel, crossing beneath Main Street, to the northern boundary of the amended DTPP area at Veterans Boulevard. Redwood Creek continues beneath Veterans Boulevard eastward past Bair Island to San Francisco Bay approximately three miles west.

In addition to Redwood Creek, a short segment of tributary Arroyo Ojo is daylighted west of the Caltrain station in Little River Park. This approximately 170-foot segment features steep banks with mature trees and degraded vegetation, but provides habitat for migratory birds and other common wildlife species.

Both creek segments are protected under Section 1600 of the California Fish and Game Code, the federal Clean Water Act Section 404 permit process regulated by the U.S. Army Corps of Engineers (USACE), the Porter-Cologne Water Quality Control Act enforced by the Regional

Water Quality Control Board (RWQCB), and locally under the Redwood City Stormwater Pollution Prevention Program, and the San Mateo Countywide Stormwater Prevention Pollution Program.

15.1.4 Coastal Salt Marsh

Northern coastal salt marsh, a sensitive vegetation type and potential habitat for special-status species, occurs along the banks of Redwood Creek (see **Figure 15-1**). Northern coastal salt marsh habitats are exposed to regular tidal inundation by brackish or saline water and feature saltwater-tolerant species, such as pickleweed (*Salicornia virginica*), gumplant (*Grindelia stricta* var. *angustifolia*), salt grass (*Distichlis spicata*), and cordgrass (*Spartina foliosa*). Habitat within Redwood Creek in the amended DTPP area is impacted by urbanization, with areas of ruderal, upland vegetation invading the salt marsh habitat. The segment of the creek between Main Street and Veterans Boulevard (towards the bay) has more salt marsh habitat than the segment between Bradford Street and Main Street, which has been partially restored with native upland plants.



Photo: Redwood Creek with coastal salt marsh habitat (January 2022)



Photo: Arroyo Ojo Creek at Little River Park near Caltrain (April 2022)

Figure 15-1
Representative Photos of Habitat Types in DTPP Plan-Wide Area

Special-status wildlife species found in coastal salt marsh include salt marsh wandering shrew (*Sorex vagrans*) (California Species of Special Concern [SSC]), Alameda song sparrow (*Melospiza melodia pusillula*) (SSC), and salt marsh harvest mouse (*Reithrodontomys raviventris*)

(Federal Endangered [FE]). However, these species have low potential in the amended DTPP area due to high levels of disturbance. Bat species may forage over this area, along with predatory birds, such as short-eared owl (*Asio flammeus*), northern harrier (*Circus hudsonius*), and red-tailed hawk (*Buteo jamaicensis*). However, roosting habitat is generally lacking in the amended DTPP area. California black rail (*Laterallus jamaicensis*) (State Threatened [ST]) and Ridgway's rail (*rallus obsoletus*) (FE) would avoid this area due to the lack of cover and fragmentary nature of the habitat.

15.1.5 Riparian

Riparian habitat is present on the banks of Redwood Creek. In addition, the small segment of Arroyo Ojo (Little River Creek) daylighted near the Caltrain station has defined, vegetated banks with emergent vegetation including cattail (*Typha latifolia*). Along the banks are brass buttons (*Cotula coronopifolia*), and upland weeds including fennel (*Foeniculum vulgare*) and brome grass (*Bromus diandrus*) (see Figure 15-1). This habitat is degraded, with a complex of tents and debris on the bank and substantial litter, but its mature trees may host nesting birds, such as house finch or dark-eyed junco (*Junco hyemalis*), while black phoebe (*Sayornis nigricans*) may nest inside tunnel entrances. Opportunistic mammals such as Norway rat (*Rattus norvegicus*) and raccoon (*Procyon lotor*) may also occur in this area, as well as in Redwood Creek.

15.1.6 Sensitive Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as the CDFW, or in local policies and regulations, and are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution, and are threatened enough to warrant protection.²

The northern coastal salt marsh is considered a sensitive natural community by the California Natural Diversity Database (CNDDDB) and as defined under CEQA. The CNDDDB does not list northern coastal salt marsh in Redwood Creek within or immediately downstream of the amended DTPP area, but it does include the northern coastal salt marsh at Bair Island as a threatened community. Habitat within Redwood Creek in the amended DTPP area is not a defined sensitive natural community, but would likely be considered a jurisdictional riparian corridor for CDFW.

15.1.7 Wildlife Corridors

Redwood Creek's proximity to the Don Edwards National Wildlife Refuge on Bair Island and San Francisco Bay makes it accessible to migratory birds, and the coastal salt marsh and riparian corridor provides a potential terrestrial wildlife movement corridor from San Francisco Bay until the creek is culverted underground at Bradford Street. Raccoon, red fox (*Vulpes vulpes*), and other wildlife may move through the corridor, especially at low tide; however, the open segment of creek is limited in its function as a wildlife corridor due to surrounding urbanization. The open

² California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), 2022. Special status species occurrences for the Palo Alto, Redwood Point, Woodside and San Mateo U.S. Geographical Survey (USGS) 7.5-minute topographic quadrangles, Commercial Version.

segment of Arroyo Ojo is too fragmentary to constitute a corridor, while other areas of the amended DTPP area are heavily developed and lack habitat.

15.1.8 Special-Status Species

Special-status species are plants and wildlife that require special protection and have been listed as rare, threatened, or endangered by Federal, State, or other agencies, including:

- Species listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the federal or California Endangered Species Acts (16 U.S.C. §1531 et seq.; Fish and Game Code §2050 et seq.)³;
- Species that meet the definitions of rare or endangered under CEQA Guidelines Section 15380;
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 et seq.);
- Plants considered by the California Native Plant Society to be rare, threatened, or endangered (typically Rank 1B and Rank 2 plants) in California⁴;
- Wildlife species of special concern to CDFW, as listed on the California Natural Diversity Data Base (CNDDDB)⁵;
- Wildlife fully protected in California (Fish and Game Code §§3511, 4700, and 5050); and/or
- Avian species protected by the federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. §703 et seq.).⁶

A list of special-status plant and wildlife species with potential to occur in the amended DTPP area and surroundings was identified by reviewing the CNDDDB, California Native Plant Society Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Information for Planning and Conservation databases. Although Ridgway's rail, San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), salt marsh harvest mouse, Alameda song sparrow, and several rare plant species have been recorded in CNDDDB in the vicinity of the amended DTPP area, these records are typically from several decades ago prior to intensive development in the area.⁶ Under current circumstances, with only vestigial fragments of natural habitat remaining, no special-status plants or wildlife are likely to inhabit the amended DTPP area, though they may occasionally visit or forage in the coastal salt marsh habitat along Redwood Creek. In general, the urbanized and disturbed character of the area, characterized by minimal vegetation, includes no habitat that would support special-status species.

³ USFWS, 2022. Information for Planning and Conservation (IPaC) database. <http://ipac.ecos.gov>

⁴ California Native Plant Society (CNPS), 2022. Inventory of Rare and Endangered Plants for the Palo Alto, Redwood Point, Woodside and San Mateo USGS 7.5-minute topographic quadrangles. Available online at <http://www.rareplants.cnps.org/>.

⁵ California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), 2022. Special status species occurrences for the Palo Alto, Redwood Point, Woodside and San Mateo U.S. Geographical Survey (USGS) 7.5-minute topographic quadrangles, Commercial Version.

⁶ *Ibid.*

15.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR. Section 15.2 of DTPP Final EIR Chapter 15, *Biological Resources*, includes the regulatory setting for this topic. The DTPP Final EIR regulatory setting is included below and is still current for this SEIR, except as noted. Both the 1990 General Plan and 2010 General Plan policies were used in the DTPP Final EIR. The 2010 General Plan has since superseded the 1990 General Plan.

15.2.1 Federal Endangered Species Act of 1973, as amended (16 U.S.C. §§1531-1543)

The federal Endangered Species Act of 1973 (FESA) and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. In addition, the FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA also provides a program for the conservation and recovery of threatened and endangered species as well as the conservation of designated critical habitat that USFWS determines is required for the survival and recovery of these listed species.

15.2.2 Migratory Bird Treaty Act (16 U.S.C. §§703-711)

The Migratory Bird Treaty Act (MBTA) is the domestic law that affirms and implements a commitment by the U.S. to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner to intentionally pursue, hunt, take, capture, or kill migratory birds anywhere in the United States. The law also applies to disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season, whether intentional or incidental.

15.2.3 Clean Water Act

Clean Water Act Section 404, which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into “waters of the United States.” USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that the proposed activity can demonstrate compliance with standard conditions. Projects that result in relatively minor impacts on waters of the United States can normally be conducted under one of the nationwide permits, if consistent with the standard permit conditions. Use of any nationwide permit is contingent on compliance with FESA Section 7. In the project area, Guadalupe River and Los Gatos Creek may qualify as waters of the United States.

15.2.4 California Endangered Species Act (Fish and Game Code §2050 et seq.)

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a listed species under both the CESA and the FESA, compliance with the FESA would satisfy the CESA if CDFW determines that the federal incidental take authorization is “consistent” with the CESA under Fish and Game Code Section 2080.1. Before a project results in take of a species listed under the CESA, a take permit must be issued under Section 2081(b).

15.2.5 State Regulation of Wetlands and Other Waters

California’s authority for regulating activities in wetlands and waters in the project area resides primarily with the State Water Resources Control Board (State Water Board). The State Water Board, acting through the San Francisco Bay Regional Water Quality Control Board, must certify that a proposed USACE permit action meets state water quality objectives (CWA Section 401). Any condition of water quality certification is then incorporated into the USACE Section 404 permit authorized for the project.

The State Water Board and the Regional Water Quality Control Boards also have jurisdiction over waters of the state under the Porter-Cologne Water Quality Control Act. The State Water Board and San Francisco Bay Regional Water Quality Control Board evaluate proposed actions for consistency with the Regional Water Quality Control Board’s *Water Quality Control Plan for the San Francisco Bay Basin*,⁷ and authorize impacts on waters of the state by issuing waste discharge requirements or, in some cases, a waiver of waste discharge requirements.

15.2.6 California Fish and Game Code Sections 1600–1603

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to the regulatory authority of CDFW under CFGC Sections 1600–1603. Under the CFGC, a *stream* is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. Specifically, CFGC Section 1603 governs private-party individuals, and CFGC Section 1601 governs public projects.

CDFW jurisdiction in altered or artificial waterways is based on the value of those waterways to fish and wildlife. CDFW must be contacted by the public or private party for a streambed alteration agreement for any project that might substantially affect a streambed or wetland.

⁷ San Francisco Bay Regional Water Quality Control Board, *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*, incorporating all amendments approved by the Office of Administrative Law as of May 4, 2017. Available at https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf.

CDFW has maintained a “no net loss” policy regarding potential impacts and has required replacement of lost habitats on at least an acre-for-acre basis.

15.2.7 California Fish and Game Code Sections 3503, 3503.5, and 3513

Under these sections 3503, 3503.5, and 3513 of the Fish and Game Code, a project operator is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds; or the taking of any nongame bird pursuant to Fish and Game Code section 3800, whether intentional or incidental.

15.2.8 City of Redwood City General Plan

The 2010 City of Redwood City General Plan (General Plan) establishes the key goals, policies, and programs for the physical development of the City through 2030. The General Plan Natural Resources Element - Natural Habitat and Open Space chapter has goals to protect, restore, and maintain creeks, sloughs, and streams to ensure adequate water flow, prevent erosion, provide for viable riparian plant and wildlife habitat and, where appropriate, allow for recreation opportunities and to identify, protect, and restore open spaces, sensitive biological resources, native habitat, and vegetation communities that support wildlife species. Goals and policies relevant to biological resources include the following:

- *Policy NR-5.1:* Restore, maintain, and enhance Redwood City’s creeks, streams, and sloughs to preserve and protect riparian and wetland plants, wildlife and associated habitats, and where feasible, incorporate public access.
- *Policy NR-5.2:* Limit construction activities to protect water quality in creeks and streams.
- *Policy NR-5.3:* Except for floating home communities, marinas, and the infrastructure necessary for the communities and marinas, prohibit building and development activities to establish a creek buffer zone, based on the site and floodplain characteristics and/or where sensitive species, communities, or habitats occur within the creek or 100-year floodplain, unless construction methods or other methods can substantially minimize damage from potential flooding.
- *Policy NR-5.4:* In conjunction with new development located along existing creeks and streams and where appropriate, incorporate daylighting for culverted portions or other bank naturalizing approaches for channeled sections as a means of creek and stream restoration.
- *Policy NR-5.5:* Except for floating home communities, marinas, and infrastructure necessary for the communities and marinas, regulate, and perhaps restrict, new development, grading, fills, and other land disturbances located immediately adjacent to a creek, stream, or in a 100-year floodplain, unless construction methods or other methods to minimize potential damage from flooding are implemented.
- *Policy NR-5.6:* Promote natural stream channel function.
- *Policy NR-5.7:* Preserve and protect riparian vegetation including non-native vegetation that functions to shade the creek and provide wildlife habitat.

- *Policy NR-8.1:* Pursue efforts to protect sensitive biological resources, including local, State, and federally designated sensitive, rare, threatened, and endangered plant, fish, and wildlife species and their habitats.
- *Policy NR-8.2:* Preserve and create contiguous wildlife habitat and movement corridors.
- *Policy NR-8.3:* Replace and control invasive, non-native vegetation and animals to the extent feasible in parks and open space areas. Encourage restoration of native vegetation.
- *Policy NR-8.4:* Consult with regulatory agencies, nonprofit groups, and other organizations in the conservation, maintenance, acquisition, and restoration of open space lands that include wildlife, plant species, and animal habitat.
- *Goal NR-9:* The Urban Forest chapter Goal NR-9 is to maintain, enhance, and increase the number of trees on both public and private property to provide the maximum benefits of improved air quality, compensate for carbon dioxide production, reduce stormwater runoff, and mitigate the urban heat island effect.
- *Policy NR-9.1:* Preserve, maintain, and expand the number of trees in Redwood City’s urban forest, on both public and private property.
- *Policy NR-9.2:* Require new trees to be planted and/or plant new trees in sufficient number, as identified on a site by site basis, on sites designated as sensitive receptors (i.e. schools or hospitals) that are in close proximity to industry, heavily traveled freeways and roads, and other similar pollution sources in order to mitigate air pollution.
- *Policy NR-9.3:* Select appropriate trees for Redwood City, focusing especially on native and landmark tree types.
- *Policy NR-9.4:* Provide a coordinated program of education, outreach, and advocacy for tree planting, maintenance, and support.

The General Plan Urban Form and Land Use chapter (in the Built Environment Element) contains the following policies relevant to biological resources:

- Apply the following performance criteria and standards, as applicable, to all new development projects, with the level of application commensurate with the scale of development:
 - Minimize direct or indirect impact to sensitive biological resources while optimizing the potential for mitigation (BE-22.2).
 - Protect and enhance the natural environmental features in Redwood City. Preserve open space resources as visual, recreational, and habitat resources, finding creative ways to provide habitat areas and species protection (BE-23.9).

15.2.9 Redwood City Tree Preservation Ordinance

As described in the DTPP Final EIR, the City of Redwood City’s Tree Preservation Ordinance (Municipal Code Chapter 35) specifies that, before any tree in Redwood City is cut, moved, or removed, an applicant must obtain a permit from the Parks and Recreation Director. The Parks and Recreation Commission may declare a tree a “heritage tree” if the tree is healthy and has adapted well to the climatic conditions of the area, is visible from a public right-of-way, and

either (a) has historic significance, (b) is indigenous to the area, or (c) is one of a group that is dependent on the others for survival.

15.3 Impacts and Mitigation Measures

15.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe biological resources impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the certified DTPP Final EIR.

15.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means; or
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Significance criterion c) was modified in 2014 to read “*state or* federally protected wetlands”. This modification of criterion c) does not affect this SEIR because the wetland areas in the amended DTPP area are adjacent to streams, thus protected under both state and federal law. In addition, the California Department of Fish and Game was renamed California Department of Fish and Wildlife in 2013.

15.3.3 Impacts and Mitigation Measures

Impact BIO-1: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that grading and construction activities associated with development could impact special-status plant or wildlife species in the coastal salt marsh along Redwood Creek. Although Ridgway's rail has been recorded on Bair Island downstream of Redwood Creek, the isolated habitat in the amended DTPP area would not be suitable for this species. Small mammals including salt marsh harvest mouse may occasionally be present within the pickleweed habitat, though it is fragmentary and of poor quality. In the event that salt marsh harvest mouse, Alameda song sparrow or other special-status species is using the coastal salt marsh habitat in the amended DTPP area, construction near this habitat could disturb these species. No construction is planned within the salt marsh habitat, but increased traffic, noise and dust from construction could result in nest abandonment or habitat loss.

To reduce impacts on these species to a less-than-significant level, DTPP Final EIR Mitigation Measure 15-1(a) required consultation with federal and State wildlife agencies, and development of appropriate project-specific mitigation plan in coordination with the agencies. Implementation of the DTPP Plan-Wide Amendments would not change this conclusion because, while this SEIR assumes a potential future geographical extension of the northern DTPP boundary, the types of construction activities that would occur would be similar to those analyzed in the DTPP Final EIR. As discussed under Impact BIO-2, the potential future alterations of Arroyo Ojo, as part of one of the Gatekeeper project at 901 El Camino Real, would take place within degraded habitat. Nevertheless, the potential exists for effects on special-status species. However, Mitigation Measure BIO-1a (formerly Mitigation Measure 15-1(a) from the DTPP Final EIR) is still applicable to the proposed DTPP Plan-Wide Amendments and sufficient to reduce potential impacts on special-status plant or wildlife species to a *less-than-significant level*.

In addition, the DTPP Final EIR found that grading and construction activities associated with development could impact nesting birds, both in sensitive habitats or in trees or shrubs throughout the amended DTPP area, which would be a potentially significant impact. Both riparian habitat, coastal salt marsh, and urban trees and shrubs may provide habitat for common nesting birds, such as house finch, mourning dove, or American robin, which are protected under the federal MBTA and California Fish and Game Code 3503. Mitigation Measure 15-3 from the DTPP Final EIR would require tree removal, trimming and ground disturbance to occur outside of nesting season (February 15 to August 31), or a nesting survey by a qualified biologist three days prior to such activity, with buffers placed around active nests in coordination with CDFW, and sufficient to address impacts on nesting birds. Implementation of the proposed DTPP Plan-Wide Amendments would entail new development of commercial, residential and retail uses. Although the existing developed state of downtown Redwood City makes it unsuitable habitat for special-status plant and wildlife species, common nesting migratory birds may be present, and demolition and construction activity associated with development may entail removal of trees and shrubs that

may provide nesting habitat for birds. The proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impact identified in the DTPP Final EIR because Mitigation Measure BIO-1b (formerly Mitigation Measure 15-3 from the DTPP Final EIR with clarifying amendments) is still applicable to the DTPP Plan-Wide Amendments and sufficient to reduce impacts on nesting birds from tree removal associated with construction and demolition activities that could occur within the amended DTPP area to a *less-than-significant* level.

Mitigation Measure BIO-1a (formerly Mitigation Measure 15-1(a) from the DTPP Final EIR). For projects in the DTPP area that adjoin Redwood Creek, the project applicant or, for any City-initiated projects, the City shall: (a) Consult with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) regarding proposed activities to determine if they could result in a "take" of a federal or State-protected species. The USFWS may presume presence or may recommend additional focused surveys to determine if any protected species are present on the site. If any special-status plant or animal species are determined to be on the property, an appropriate mitigation plan shall be developed in consultation with, and meeting the mitigation criteria of, the USFWS and the CDFW to provide for protection of such species (e.g., additional building and sidewalk setbacks from the creek top of bank, use of compatible native and noninvasive species in landscaping, changes to proposed lighting, off-site habitat replacement or enhancement).

Mitigation Measure BIO-1b (formerly Mitigation Measure 15-3 from the DTPP Final EIR with clarifying amendments): Project Applicant shall ensure that all tree removal and trimming, as well as ground disturbing activities, are scheduled to take place outside of the breeding season (February 15 to August 31). If construction is unavoidable during this time, a qualified biologist shall conduct a survey for nesting birds no more than three days prior to the removal or trimming of any tree and prior to the start of ground disturbing activities. If active nests are not present, project activities can proceed as scheduled. If active nests of protected species are detected, a suitable buffer shall be established around the nest based on CDFW standards, and the buffer shall remain in place until the City has determined, in consultation with the qualified biologist, that the buffer is no longer necessary to avoid significant impacts to the nest.

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact BIO-2: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that future individual development projects on parcels adjoining Redwood Creek or any City-initiated creekside improvements could affect sensitive coastal salt marsh habitat, which would be a potentially significant impact. In addition, the daylighted portion of Arroyo Ojo in Little River Park contains riparian habitat, albeit degraded, containing litter and non-native upland vegetation. As part of the proposed Gatekeeper project at 901 El Camino Real, a subsequent development project that is considered in this SEIR, the project applicant proposes

to realign various parcels and to relocate and alter approximately 170 feet of existing culvert and approximately 170 feet of Arroyo Ojo, a small creek that is otherwise completely culverted within downtown Redwood City. Under this proposal, the northernmost portion of the existing daylighted creek would be placed in a culvert, while the existing culverted portion of the creek, between California Street and El Camino Real, would be relocated and daylighted. This proposal, if implemented, would result in temporary effects to riparian habitat during construction and could result in permanent impacts, depending on the intensity and nature of the work proposed.

DTPP Final EIR Mitigation Measure 15-1(b) was identified to reduce impacts on sensitive natural communities to a less-than-significant level by maintenance of setbacks from Redwood Creek, erosion control methods, and management of stormwater pollution. In addition, for permanent impacts to waterways, wetlands or riparian habitat, DTPP Final EIR Mitigation Measure 15-2 includes implementation of all permit conditions applied by CDFW or other regulatory agencies for culverting of the waterway.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impact identified in the DTPP Final EIR because Mitigation Measure BIO-2a and 2b (formerly Mitigation Measures 15-1(b) and 15-2 from the DTPP Final EIR, respectively) are still applicable to the DTPP Plan-Wide Amendments and sufficient to reduce impacts to the special-status northern coastal salt marsh community and riparian habitat in Arroyo Ojo, to a *less-than-significant* level.

Mitigation Measure BIO-2a (formerly Mitigation Measure 15-1(b) from the DTPP Final EIR with clarifying amendments): The project applicant or the City shall comply with the Redwood City Stormwater Pollution Prevention Program, including maintenance of setbacks from Redwood Creek, erosion control methods, and measures for the avoidance of stormwater pollution. The Redwood City Engineer is responsible for making the determination as to setback limits and any permitted development within a setback.

Mitigation Measure BIO-2b (formerly Mitigation Measure 15-2 from the DTPP Final EIR with clarifying amendments): For all projects within the amended DTPP area that involve modifications to potential wetlands, riparian zones, or regulated waters, the project applicant shall obtain all required permits and approvals from the U.S. Army Corps of Engineers (ACE), the California Department of Fish and Wildlife (CDFW) and the Regional Water Quality Control Board (RWQCB). All project design modifications, habitat replacement and mitigation measures required by the ACE, CDFW and RWQCB shall be incorporated into the project prior to project approval.

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact BIO-3: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that future development adjacent to Redwood Creek may affect potential jurisdictional wetland habitat, and this represented a potentially significant impact. Mitigation Measure BIO-2b (formerly Mitigation Measure 15-2 from the DTPP Final EIR) would reduce this impact to a less-than-significant level by obtaining and adhering to all required federal and State permits for wetlands. The City has received applications for sites within the amended DTPP area. These applications are on file and although subject to change, are representative of the redevelopment potential of certain locations within the amended DTPP area. As described under Impact BIO-2, a small section of Arroyo Ojo is proposed to be relocated and altered as part of a subsequent development project. These changes, if implemented, would result in temporary effects to open water during construction and could result in permanent impacts, depending on the intensity and nature of the work proposed. The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impact identified in the DTPP Final EIR because implementation of Mitigation Measure BIO-2b (formerly Mitigation Measure 15-2 from the DTPP Final EIR) is sufficient to ensure that potential impacts on wetlands and open waters are minimized and adequate replacement or compensatory mitigation is provided, reducing impacts to a *less-than-significant* level.

Mitigation: Implement Mitigation Measure BIO-2b (permitting for modifications to potential wetlands, riparian zones, or regulated waters)

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact BIO-4: Implementation of the DTPP Plan-Wide Amendments would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that even though the riparian corridor of Redwood Creek provides a potential wildlife movement corridor, the open segment of the creek within the DTPP area is limited in its function as a wildlife corridor due to extensive surrounding urbanization. However, the DTPP Final EIR found that given the proximity to the Don Edwards National Wildlife Refuge on Bair Island and San Francisco Bay, the DTPP area is accessible to migratory birds. The DTPP Final EIR found that grading and construction activities associated with development could impact birds protected under the federal MBTA. DTPP Final EIR Mitigation Measure 15-3 was identified to reduce this impact to a less-than-significant level.

Migratory birds passing through Redwood City along the Pacific Flyway, particularly in spring and fall, may experience collision with tall buildings while in flight. Approximately 100 million

to 1 billion birds die in North America as a result of building collisions each year.⁸ Daytime collisions occur most often when birds fail to recognize window glass because it reflects clouds and sky. Lighting in high-rise buildings also affects birds during their movement and reproduction. Indirect effects of light disturbance on migratory birds may include delayed arrival at breeding or wintering grounds, and reduced energy stores necessary for migration, winter survival, or subsequent reproduction.⁹

As discussed in Chapter 2, *Project Description*, the DTPP Plan-Wide Amendments would result in increased development within the downtown area. Redevelopment of areas presently used for parking or low-rise retail would increase the overall building development square footage, as well as increase building heights and density, within the amended DTPP area compared to existing conditions. The increase in building development with implementation of the DTPP Plan-Wide Amendments may incrementally increase the likelihood of striking windows of the proposed buildings during flight, causing injury or mortality. In addition, potential construction night lighting, and, under operation, increased building night lighting within the amended DTPP area could attract migratory birds and incrementally increase the likelihood of strike injuries or mortality. Outdoor landscaping close to buildings could attract birds and may also increase the likelihood of bird collisions with nearby structures. However, the amended DTPP area development is proposed within existing developed areas and not within natural areas, which attract higher numbers of birds, which reduces the likelihood of collisions.

In considering the potential collision risks to migratory birds, because development associated with the amended DTPP area would not alter the height or density previously studied and would be located near similar tall buildings within an existing developed area, with a lack of local natural features that attract birds, potential impacts to migratory birds passing through Redwood City along the Pacific Flyway are therefore considered less than significant. However, urban trees and shrubs within the amended DTPP area may also provide habitat for birds protected under the federal MBTA. The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impact identified in the DTPP Final EIR. Mitigation Measure BIO-1 (Mitigation Measure 15-3 from the DTPP Final EIR with clarifying amendments) is applicable to the DTPP Plan-Wide Amendments and sufficient to reduce this impact to a *less-than-significant* level.

Mitigation: Implement Mitigation Measure BIO-1b (nesting bird protection)

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

⁸ Seewagen, C. L. and C. Sheppard, 2017. Bird Collisions with Windows: An Annotated Bibliography. American Bird Conservancy, Washington, DC.

⁹ Gauthreaux, S.A., Belser, C.G., 2006. *Effects of Artificial Night Lighting on Migrating Birds*, In: Rich, C. and Longcore, T., Ecological Consequences of Night Lighting, Island Press, Covelo, CA, pp. 67–93.

Impact BIO-5: Implementation of the DTPP Plan-wide Amendments would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that future construction activities associated with development may result in the removal of heritage trees, as defined by the City’s Tree Preservation Ordinance (Municipal Code Chapter 35), a potentially significant impact. Redwood City’s Tree Preservation Ordinance protects trees of 12 inches diameter at breast height (dbh) or 38 inches circumference, as well as heritage trees (which may be any tree of significance to the community), and requires that a permit be obtained if removal of such trees is necessary. DTPP Final EIR Mitigation Measure 15-4 was identified to reduce impacts related to tree removal to a less-than-significant level and would require that any project involving tree removal complete the application and review process specified in the City’s Tree Preservation Ordinance (Municipal Code Chapter 35). Future development under the DTPP Plan-Wide Amendments could similarly impact trees included in the Tree Preservation Ordinance. The DTPP Plan-Wide Amendments would not result in new or more severe impacts than the impact identified in the DTPP Final EIR because Mitigation Measure BIO-5 (formerly Mitigation Measure 15-4 from the DTPP Final EIR) is still applicable to the DTPP Plan-Wide Amendments and sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure BIO-5 (formerly Mitigation Measure 15-4 from the DTPP Final EIR): Any project in the DTPP area that would involve the removal of any tree shall complete the application and review process specified in the City’s Tree Preservation Ordinance (Municipal Code chapter 35) prior to project approval.

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact BIO-6: Implementation of the DTPP Plan-Wide Amendments would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (*No Impact*)

The DTPP Final EIR did not discuss this impact, because no adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan applies to the DTPP area. The same is true today. Consequently, there would be *no impact* from implementation of the DTPP Plan-Wide Amendments.

15.4 References

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB), 2022. Special status species occurrences for the Palo Alto, Redwood Point, Woodside and San Mateo U.S. Geographical Survey (USGS) 7.5-minute topographic quadrangles, Commercial Version.
- California Native Plant Society (CNPS), 2022. Inventory of Rare and Endangered Plants for the Palo Alto, Redwood Point, Woodside and San Mateo USGS 7.5-minute topographic quadrangles. Available online at <http://www.rareplants.cnps.org/>.
- Gauthreaux, S.A., Belser, C.G., 2006. *Effects of Artificial Night Lighting on Migrating Birds*, In: Rich, C. and Longcore, T., *Ecological Consequences of Night Lighting*, Island Press, Covelo, CA, pp. 67–93.
- Redwood City General Plan. 2010. October 11. <https://www.redwoodcity.org/departments/community-development-department/planning-housing/planning-services/general-plan-precise-plans/general-plan>
- Seewagen, C. L. and C. Sheppard, 2017. *Bird Collisions with Windows: An Annotated Bibliography*. American Bird Conservancy, Washington, DC.
- USFWS, 2022. Information for Planning and Conservation (IPaC) database. <http://ipac.ecos.gov>.

This page intentionally left blank

CHAPTER 16

Geology and Soils

This SEIR chapter analyzes the effects of the DTPP Plan-Wide Amendments on geology and soils, focusing on changes to the DTPP Final EIR project (certified in 2011) that may result in new or more severe impacts, and describes any new or expanded mitigation measures needed to address any such impacts.

Findings of the DTPP Final EIR

Seismic hazards impacts (i.e., impacts related to surface rupture, ground shaking, differential settlement, landslides, liquefaction, and lateral spreading) were discussed in the DTPP Final EIR, and they were identified as less-than-significant impacts. The potential for ground rupture, earthquake-induced landslides, and lateral spreading are considered low but the DTPP area is susceptible to ground shaking and liquefaction. The DTPP Final EIR concluded that potential impacts associated with these seismic hazards would be adequately mitigated by existing laws, regulations, and policies (including those required by the California Building Code [CBC]) and mitigation was not required.

Expansive soils impacts were identified in the DTPP Final EIR as potentially significant. Mitigation Measure 16-1 was identified in the DTPP Final EIR to require that all design-level geotechnical investigations for future developments include an analysis of expansive soil hazards and provide stabilization measures as necessary, which would be in conformance with the CBC.

Corrosive soils impacts were identified in the DTPP Final EIR as potentially significant. Mitigation Measure 16-2 was identified in the DTPP Final EIR to require that all water systems and other buried metal infrastructure associated with future development have cathodic protection and all concrete designs conform with California Department of Transportation (Caltrans) standards. With mitigation, this impact was found to be less than significant.

Soil erosion and sedimentation impacts were identified in the DTPP Final EIR as potentially significant. Mitigation Measure 16-3 was identified in the DTPP Final EIR to require the preparation of an erosion control plan for all future developments involving grading 10,000 square feet or more, consistent with the state Construction General Permit and its required Stormwater Pollution Prevention Plan (SWPPP). With mitigation, this impact was found to be less than significant.

Potentially significant impact paleontological resources were identified in the DTPP Final EIR. Mitigation Measure 7-5 was identified in the DTPP Final EIR to ensure that a qualified

paleontologist assesses each future development for potential impacts to significant paleontological resources. With mitigation, this impact was found to be less than significant.

16.1 Environmental Setting

16.1.1 Regional and Local Geology

The amended DTPP area that would be governed by the DTPP Plan-Wide Amendments lies within the geologically complex Coast Ranges Geomorphic Province¹ in Redwood City.² The tectonics of the San Andreas Fault and other major faults in the western part of California have played a major role in the geologic history of the area, driven by the interaction of the Pacific and North American Tectonic Plates. The region is marked by northwest-trending elongated ranges and narrow valleys that roughly parallel the coast and the San Andreas Fault Zone. Geologic materials are mostly composed of marine sedimentary deposits, metamorphic rocks, and volcanic rocks.

16.1.2 Faults and Seismicity

Faults

The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Structures, transportation facilities, and utility systems crossing fault traces are at risk during a major earthquake due to ground rupture caused by differential lateral and vertical movement on opposite sides of the active fault trace.

There are no known Holocene-active³ faults (faults identified by the California Geological Survey (CGS) as Earthquake Fault Zones [EFZ]) within the city of Redwood City.⁴ While the San Andreas and Hayward fault zones (both classified as EFZs by CGS) are in proximity to the city, given that they are not within city limits, surface rupture of these faults is not an issue in the amended DTPP area.

Ground Shaking

The Working Group on California Earthquake Probabilities (WGCEP) is a collaboration between the U.S. Geological Survey (USGS), CGS, and the Southern California Earthquake Center. The WGCEP recently evaluated the probability of one or more earthquakes of Mw 6.7 or higher occurring in California over the next 30 years. The WGCEP estimated that the San Francisco Bay Area as a whole has a 72 percent chance of experiencing an earthquake of Mw 6.7 or higher over

¹ A geomorphic province is a regional area that possesses similar bedrock, structure, history, and age.

² This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

³ Holocene-active faults are those that have experienced fault movement within the past 11,700 years.

⁴ California Geological Survey (CGS), 2010. Fault Activity Map of California. Map. Scale 1:175,000.

the next 30 years, with the Hayward and San Andreas Faults being the most likely to cause such an event.⁵

The entire San Francisco Bay Area region, including the amended DTPP area, could be subject to strong ground shaking during earthquakes. ShakeMap is a product of the USGS Earthquake Hazards Program; ShakeMap earthquake scenarios represent one realization of a potential future earthquake by assuming a particular magnitude and location. According to the ShakeMaps that correspond with the earthquake planning scenario generated by USGS, if a large earthquake were to occur on any of the active faults in the region (San Andreas and Hayward fault zones), the city would be subjected to strong to very strong seismic ground shaking (USGS, 2013a; USGS 2013b).

Liquefaction and Lateral Spreading

Liquefaction is a phenomenon in which unconsolidated, water-saturated sediments become unstable as a result of the effects of strong seismic shaking. During an earthquake, these sediments can behave like a liquid, potentially causing severe damage to overlying structures.

Lateral spreading is a variety of minor landslide that occurs when unconsolidated liquefiable material breaks and spreads due to the effects of gravity, usually down gentle slopes. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake. The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of ground shaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on buried pipelines that can lead to leaks or pipe failure.

Subsidence

Subsidence is the gradual lowering of the land surface due to compaction of underlying materials. Subsidence can result from extraction of groundwater and oil, which can cause subsurface clay layers to compress and lower the overlying land surface. Subsidence occurs because the presence of water in the pore spaces in between grains helps to support the skeletal structure of the geologic unit. If the water is removed, the structure becomes weaker and can subside.

⁵ Field, E. H., Glenn P. Biasi, Peter Bird, Timothy E. Dawson, Karen R. Felzer, David D. Jackson, Kaj M. Johnson, Thomas H. Jordan, Christopher Madden, Andrew J. Michael, Kevin R. Milner, Morgan T. Page, Tom Parsons, Peter M. Powers, Bruce E. Shaw, Wayne R. Thatcher, Ray J. Weldon II, and Yuehua Zeng (Field et al.), 2015. Long-Term Time-Dependent Probabilities for the Third Uniform California Earthquake Rupture Forecast (UCERF3). Bulletin of the Seismological Society of America, Vol. 105, No. 2A. pp. 511-543. April, 2015. doi: 10.1785/0120140093.

Subsidence can occur within expansive soils, which do occur in the amended DTPP area.

Landslides

Landslides are one of the various types of downslope movements in which rock, soil, and other debris are displaced by the effects of gravity. The potential for material to detach and move down slope depends on a variety of factors including the type of material, water content, steepness of terrain, and more. Given the relatively flat topography within the amended DTPP area, landslides are not likely.

16.1.3 Soils

Expansive Soils

Expansive soils are soils that possess a “shrink-swell” characteristic, also referred to as linear extensibility. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying; the volume change is reported as a percent change for the whole soil. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, or perched groundwater. Expansive soils are typically very fine-grained and have a high to very high percentage of clay. Structural damage may occur incrementally over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Linear extensibility is used to determine the shrink-swell potential of soils. If the linear extensibility is more than 3 percent, shrinking and swelling may cause damage to buildings, roads, and other structures.⁶ The soil in the lowland portions of Redwood City, including the amended DTPP area, are predominantly clays and silty clays with a high shrink-swell potential.

16.1.4 Paleontology Resources

Paleontological resources are the fossilized remains of plants and animals: vertebrates (animals with backbones; e.g., mammals, birds, fish), invertebrates (animals without backbones; e.g., starfish, clams, coral), and microscopic plants and animals (microfossils). Paleontological resources can include mineralized body parts, body impressions, or footprints and burrows. They are valuable, non-renewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived.

Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which plants or animals became fossilized usually were quite different from the present environments in which the geologic formations exist.

⁶ Natural Resources Conservation Service (NCRS), 2017. Title - National Soil Survey Handbook. Part 618 – Soil Properties and Qualities. Section 618.41, Linear Extensibility Percent.

The Society of Vertebrate Paleontology (SVP) established guidelines for the identification, assessment, and mitigation of adverse impacts on non-renewable paleontological resources. Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources.⁷

The SVP has helped define the value of paleontological resources. In particular, the SVP indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., are represented in institutional collections). Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

Paleontological sensitivity is defined as the potential for a geologic formation to produce scientifically important fossils. This is determined by the rock type, the past history of the geologic unit in producing significant fossils, and the fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010), the SVP defines four categories of paleontological sensitivity for rock units, reflecting their potential for containing additional significant paleontological resources:

- **High Potential:** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered;
- **Low Potential:** Rock units that are poorly represented by fossil specimens in institutional collections, or that based on general scientific consensus only preserve fossils in rare circumstances, with the presence of fossils being the exception, not the rule;
- **Undetermined Potential:** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment; and
- **No Potential:** Rock units such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) that will not preserve fossil resources.

The DTPP Final EIR does not specifically identify the paleontological potential within the amended DTPP area. However, it does mention that, according to the University of California Museum of Paleontology (UCMP) online fossil locality database, there are no known fossil localities within the amended DTPP area. The DTPP Final EIR further states that the nearest recorded fossil locality is two miles south, within the City of Atherton.

⁷ Society of Vertebrate Paleontology (SVP), 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Prepared by: SVP Impact Mitigation Guidelines Revision Committee.

16.2 Regulatory Setting

The following section focuses on any changes to the regulatory setting that have occurred since certification of the DTPP Final EIR in 2011. DTPP EIR Chapter 16, *Geology and Soils*, Section 16.2, *Regulatory Setting*, includes the regulatory setting for this topic and is still current for this SEIR, except as noted below. (Both the 1990 General Plan and 2010 General Plan policies were used in the 2010 DTPP EIR. The 2010 General Plan has since superseded the 1990 General Plan.)

16.2.1 California Building Code

The California Building Code (CBC), codified in CCR Title 24, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards for structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction.

CCR Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The 2019 edition of the CBC is based on the 2018 International Building Code published by the International Code Council, which replaced the Uniform Building Code. The code is updated triennially; the 2019 edition of the CBC was published by the California Building Standards Commission on July 1, 2019, and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures. The CBC provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (such as wind loads), for inclusion in building codes.

CBC Chapter 18 covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load bearing of soils (Section 1806) and foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810).

Requirements for geotechnical investigations are included in CBC Appendix J, Section J104, Engineered Grading Requirements. As outlined in Section J104, applications for a grading permit must be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953–17955 and in 2019 CBC Section 1802. Samples from subsurface investigations, such as from borings or test pits, must undergo testing. Studies must be

done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

16.2.2 National Pollutant Discharge Elimination System Construction General Permit

Construction activities associated with future development in the proposed within the amended DTPP area would disturb more than one acre of land surface, potentially affecting the quality of stormwater discharges into waters of the United States. Development allowed by the DTPP Plan-Wide Amendments would, therefore, be subject to the National Pollutant Discharge Elimination System (NPDES) *General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ).

The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges from construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a risk level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the risk to receiving waters during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could be discharged to receiving water bodies, and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving-waters risk level reflects the risk to receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards
- Good site management “housekeeping”
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a SWPPP that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from coming into contact with stormwater and moving off-site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management, and good housekeeping. They are intended to protect surface water quality by preventing eroded soil and construction-related pollutants from migrating off-site from the construction area. Routine inspection of all BMPs is required under the Construction General Permit. In addition, the SWPPP must contain a visual monitoring program, a chemical monitoring program for non-

visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project area. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff.

Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and washing and fueling of vehicles and equipment. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site after construction).

In the amended DTPP area, the Construction General Permit is implemented and enforced by the San Francisco Bay Regional Water Quality Control Board, which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the San Francisco Bay Regional Water Quality Control Board of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

16.3 Impacts and Mitigation Measures

16.3.1 Scope of Analysis

The scope of this impact analysis is limited to the identification of new or more severe geology and soils impacts that would result from implementation of the DTPP Plan-Wide Amendments, in relation to the DTPP Final EIR.

16.3.2 Significance Criteria

Significance criteria from Appendix G of the CEQA Guidelines were used as the basis of the impact analysis in this chapter. A significant impact could occur if implementation of the DTPP Plan-Wide Amendments would:

- directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

- i. rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. *Refer to Division of Mines and Geology Special Publication 42*; or
 - ii. strong seismic ground shaking; or
 - iii. seismic-related ground failure, including liquefaction; or
 - iv. landslides.
- result in substantial soil erosion or the loss of topsoil; or
 - be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse; or
 - be located on expansive soil⁸ creating substantial direct or indirect risks to life or property; or
 - have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or
 - directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impacts to paleontological resources were addressed in the cultural and historic resources section of the DTPP Final EIR. Per the Governor’s Office of Planning and Research’s revisions to the CEQA Guidelines of 2018, impacts to paleontological resources will be analyzed in this chapter.

16.3.3 Impacts and Mitigation Measures

Overall, the impacts related to implementation of the DTPP Plan-Wide Amendments would be the same as those identified in the DTPP Final EIR because the geologic environment has not changed and the types of development anticipated are similar to those enabled by the DTPP.

Impact GEO-1: Implementation of the DTPP Plan-Wide Amendments would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. (*Less than Significant*)

The DTPP Final EIR found that, while the DTPP would result in future developments (including residential and commercial developments) that could be affected by seismic hazards, the existing laws and regulations would be sufficient to mitigate those hazards. The impacts from seismic hazards (i.e., surface rupture, ground shaking, liquefaction, landslides, etc.) would be a less than significant impact and no mitigation were necessary.

⁸ The CBC, based on the International Building Code and the now defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils.

The DTPP Plan-Wide Amendments would indirectly result in future development, such as new residential and commercial spaces.⁹ As discussed in the DTPP Final EIR, all future development would be subject to the state and local laws in place to ensure that new developments are constructed in accordance with the CBC and are structurally sound. Specifically, all future developments would be required to undergo a geotechnical investigation and submit a geotechnical report prior to construction. The investigation would inform the geotechnical design of all structures to ensure they are able to withstand any impacts from seismic hazards, such as strong ground shaking and liquefaction (surface rupture and landslides are not likely in the amended DTPP area and were not identified in the DTPP Final EIR as potentially significant impacts). Compliance with all applicable state and local laws would ensure that impacts related to development allowed by the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts related to seismic hazards than the impacts identified in the DTPP Final EIR. Therefore, impacts related to seismic hazards would be *less than significant*.

Impact GEO-2: Implementation of the DTPP Plan-Wide Amendments would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that the DTPP would create a potentially significant impact as it relates to erosion and sedimentation due to the ground disturbance associated with future developments, requiring mitigation. DTPP Mitigation Measure 16-3 was identified to reduce this impact to a less-than-significant level by requiring the preparation of an erosion control plan for all future developments involving grading 10,000 square feet or more, consistent with the state Construction General Permit and its required SWPPP.

Implementation of the DTPP Plan-Wide Amendments would not change this conclusion, although it would apply to a larger area, given the assumed future northerly extension of the DTPP boundary, where soil conditions are the same as within the existing DTPP area. Ground disturbance within the amended DTPP area could lead to soil erosion in the area, and the DTPP Plan-Wide Amendments would therefore present a potentially significant impact, similar to the impact identified in the DTPP Final EIR.

The DTPP Plan-Wide Amendments would not result in new or more severe impacts related to erosion than the impacts identified in the DTPP Final EIR. Mitigation Measure GEO-2 (formerly DTPP Final EIR Mitigation Measure 16-3, with clarifying amendments), is applicable to the DTPP Plan-Wide Amendments and is sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure GEO-2 (formerly Mitigation Measure 16-3 from the DTPP Final EIR, with clarifying amendments): The City shall require applicants for future development projects in the amended DTPP area involving a grading area of 10,000 or more square feet to prepare erosion control plans subject to City approval and consistent with the required project SWPPPs as well as Best Management Practices (BMPs) specified by the Redwood City Stormwater Management and Discharge Control Program (Municipal Code Chapter

⁹ There are no unique geologic features in the potential DTPP extension area or other circumstances that would result in the potential future extension having effects different from those identified in the DTPP Final EIR.

27A). The plans and BMPs shall be implemented during construction. Erosion during all phases of construction shall be controlled through the use of erosion and soil transport control facilities. These shall include the use of catch basins and filter fabrics, and the direction of stormwater runoff away from disturbed areas. The plans shall also provide for long-term stabilization and maintenance of remaining exposed soils after construction is completed. Areas disturbed by construction shall be either covered with impervious surfaces (e.g., buildings and pavement) or fully stabilized with landscaping and/or native vegetation. All revegetated areas shall be irrigated and maintained as necessary to ensure the long-term survival of the vegetation. Implementation of this measure would reduce this potential impact to a less-than-significant level.

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact GEO-3: Implementation of the DTPP Plan-Wide Amendments would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. (*Less than Significant*)

As discussed in Impact GEO-1, the DTPP Final EIR concluded that the risks associated with unstable geologic units or soil are low, but that effects of strong seismic ground shaking and liquefaction would present a potentially significant impact.

Implementation of the DTPP Plan-Wide Amendments would not change this conclusion, although it would apply to a larger area, given the assumed potential future northerly extension of the DTPP boundary, where soil conditions are the same as within the existing DTPP area. As further discussed in Impact GEO-1, compliance with all applicable local and state laws (i.e., the CBC) would ensure that all future developments allowed by the proposed DTPP Plan-Wide Amendments would be designed consistent with the CBC, which would ensure that new structures would not be susceptible to the effects of unstable geologic units and soils. Thus, impacts of the proposed DTPP Plan-Wide Amendments would not result in new or more severe impacts related to unstable geologic units than those identified in the DTPP Final EIR. Therefore, the impact would be *less than significant*.

Impact GEO-4: Implementation of the DTPP Plan-Wide Amendments would be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2019)¹⁰, creating substantial direct or indirect risks to life or property. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that the DTPP would create a potentially significant impact as it relates to future developments within expansive and/or corrosive soil. Implementation of the DTPP Plan-

¹⁰ The California Building Code (CBC), which is based on the International Building Code (IBC) replaced the now defunct Uniform Building Code (UBC) in 2000; it no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils. This is discussed further in the *Regulatory Setting*.

Wide Amendments would not change this conclusion, which would apply to a larger area, given the assumed potential future northerly extension of the DTPP boundary, where soil conditions are the same as within the existing DTPP area. To reduce impacts related to expansive and corrosive soil, the DTPP Final EIR includes Mitigation Measure 16-1 and Mitigation Measure 16-2, which state that the required geotechnical investigations must include an analysis of potential soil hazards and, if expansive or corrosive soils are identified, must include recommendations to address those issues (including engineering non-expansive soils and covering all metal infrastructure with cathodic protection from corrosive soil). Because nothing has changed with regard to soil conditions in the amended DTPP area, the DTPP Plan-Wide Amendments would not result in a new or more severe impact than the impact identified in the DTPP Final EIR. Mitigation Measure GEO-4a (formerly Mitigation Measure 16-1 from the DTPP Final EIR with clarifying amendments) and Mitigation Measure GEO-4b (formerly Mitigation Measure 16-2 from the DTPP Final EIR with clarifying amendments) are applicable to the DTPP Plan-Wide Amendments and are sufficient to reduce this impact to a *less than significant* level.

Mitigation Measure GEO-4a (formerly Mitigation Measure 16-1 from the DTPP Final EIR, with clarifying amendments): The detailed, design-level geotechnical investigations required by the City Building Official shall include analysis of expansive soil hazards and recommend stabilization measures. Once grading plans have been developed, the actual use of expansive soils in engineered fill construction shall be further evaluated by a geotechnical engineer and the location of primary borrow source areas for fills shall be determined. Additionally, supplemental field and laboratory testing of potential cut materials shall be completed. In addition to observing all cut and fill slope construction, the project geotechnical engineer shall inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with City-approved construction specifications. If expansive soils are not fully remediated on each lot and in the area of all public and private improvements at the time of site development, the project geotechnical engineer shall make site-specific recommendations for grading, drainage installation, foundation design, the addition of soil amendments, and/or the use of imported, non-expansive fill materials, as may be required to fully mitigate the effects of weak or expansive soils and prevent future damage to project improvements. These recommendations shall be reviewed by a City-retained registered geologist and, following his or her approval, be incorporated into a report to be included with each building permit application and with the plans for all public and common area improvements. In addition, since proper drainage, in particular, can improve the performance of expansive soils by significantly reducing their tendency to shrink and swell, deed restrictions shall be imposed to prohibit significant modification of finished lot grades that would adversely affect site drainage.

Mitigation Measure GEO-4b (formerly Mitigation Measure 16-2 from the DTPP Final EIR with clarifying amendments): Project plans and specifications shall ensure that water systems and other buried metal infrastructure in all future development within the area subject to the DTPP Plan-Wide Amendments shall, in addition to other coatings called for in the specifications, have cathodic protection using a sacrificial anode system. Design criteria for cathodic protection shall conform to Part VII (G) of the City's water system design criteria and standard specification details Section 02661.

Concrete mix designs shall conform to California Department of Transportation (Caltrans) Memo to Designers 10-5 January 2002 Protection Reinforcement Against Corrosion Due to Chlorides, Acids, and Sulfates.

Significance after Mitigation: Less than Significant (No new significant impact compared to DTPP Final EIR)

Impact GEO-5: Implementation of the DTPP Plan-Wide Amendments would not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. (*Less than Significant*)

The DTPP Final EIR did not address the impacts related adequate soils for the use of septic tanks or alternative waste water disposal systems because septic systems are not appropriate within urbanized areas. The same is still true, and no septic systems would be installed within the amended DTPP area. As future developments would connect to the existing sewer system, there would a *less than significant* related to the suitability of the soils.

Impact GEO-6: Implementation of the DTPP Plan-Wide Amendments would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (*Less than Significant with Mitigation*)

The DTPP Final EIR determined that the DTPP would present a potentially significant impact to paleontological resources as a result of deep excavations associated with future development in the amended DTPP area. Implementation of the DTPP Plan-Wide Amendments would not change this conclusion, although it would apply to a larger area due to the assumed potential future extension of the amended DTPP area. To reduce impacts to significant paleontological resources, the DTPP Final EIR includes Mitigation Measure 7-5, which requires that a qualified paleontologist assess each future development to ensure construction activities do not disturb or destroy significant paleontological resources. If it is determined that there is a high potential to encounter significant paleontological resources proper procedures would be followed to ensure paleontological resources are avoided or handled properly if avoidance is not feasible. As the maximum allowable height of buildings allowed with the DTPP Plan-Wide Amendments would not change, the depth of excavation during construction would remain the same as well. Because the possibility of encountering paleontological resources has not changed, the DTPP Final EIR Mitigation Measure 7-5 is sufficient to address impacts from the DTPP Plan-Wide Amendments on significant paleontological resources. The DTPP Plan-Wide Amendments would not result in new or more severe impacts on paleontological resources than were identified in the DTPP Final EIR. Mitigation Measure GEO-6 (formerly Mitigation Measure 7-5 from the DTPP Final EIR with clarifying amendments) is applicable to the DTPP Plan-Wide Amendments and is sufficient to reduce this impact to a *less-than-significant* level.

Mitigation Measure GEO-6 (formerly Mitigation Measure 7-5 from the DTPP Final EIR, with clarifying amendments): Prior to the issuance of grading or demolition permits, the Community Development & Transportation Department, in coordination with a qualified paleontologist, shall assess individual development project proposals within the amended DTPP area for the potential to destroy unique paleontological resources. The City’s Community Development and Transportation Department shall require development proposals entailing significant earthworks or deep foundations with the potential to penetrate sedimentary rock layers to incorporate a study by a professional paleontologist to assess the potential for damage of paleontological resources. Should the paleontologist determine that the proposal has the potential to damage paleontological resources, the paleontologist shall provide detailed provisions for the protection of these resources to the City’s Community Development and Transportation Department. These provisions may include the complete avoidance of the resource, in-place preservation, and/or complete data recovery as discussed in Mitigation Measure CR-2. Implementation of this measure would reduce the potential impact on paleontological resources to a less-than-significant level.

Significance after Mitigation: Less than Significant

16.4 References

- California Geological Survey (CGS), 2010. Fault Activity Map of California. Map. Scale 1:175,000.
- Field, E. H., Glenn P. Biasi, Peter Bird, Timothy E. Dawson, Karen R. Felzer, David D. Jackson, Kaj M. Johnson, Thomas H. Jordan, Christopher Madden, Andrew J. Michael, Kevin R. Milner, Morgan T. Page, Tom Parsons, Peter M. Powers, Bruce E. Shaw, Wayne R. Thatcher, Ray J. Weldon II, and Yuehua Zeng (Field et al.), 2015. Long-Term Time-Dependent Probabilities for the Third Uniform California Earthquake Rupture Forecast (UCERF3). *Bulletin of the Seismological Society of America*, Vol. 105, No. 2A. pp. 511-543. April, 2015. doi: 10.1785/0120140093.
- Natural Resources Conservation Service (NCRS), 2017. Title - National Soil Survey Handbook. Part 618 – Soil Properties and Qualities. Section 618.41, Linear Extensibility Percent.
- Society of Vertebrate Paleontology (SVP), 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Prepared by: SVP Impact Mitigation Guidelines Revision Committee.
- United States Geological Survey (USGS), 2016a. ShakeMap. Earthquake Planning Scenario. M 7.2 Scenario Earthquake – N. San Andreas Peninsula.
- USGS, 2016b. ShakeMap. Earthquake Planning Scenario. M 6.8 Scenario Earthquake – Hayward-Rogers Creek; Hayward S.
- USGS, 2022. Quaternary Fault and Fold Database of the United States. Interactive Fault Map. Accessed on September 20, 2021. Available online at: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>.

CHAPTER 17

Cumulative Impacts

Cumulative impacts, as defined in CEQA Guidelines Section 15355, refer to two or more individual effects that, when considered together, are “considerable” or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to the impacts of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in Guidelines Section 15130:

- An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable” (i.e., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.
- A project’s contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.
- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

An EIR must determine whether an individual project’s contribution to a significant cumulative impact is *considerable*. This means that the project’s proportional share is considered adverse in conjunction with other similar projects that may combine to result in physical impacts.

The cumulative impact analysis for each individual resource topic is described in the corresponding resource section of this chapter, immediately following the description of the project-specific impacts and mitigation measures.

Two approaches to a cumulative impact are articulated in CEQA Guidelines Section 15130(b)(1): (1) The analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a proposed project; or (2) a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. A hybrid approach can also be used to depict the relative

conditions more accurately, but reflecting elements of both the list and plan methods for certain issue areas and impact discussions.

Most of the quantitative analysis in this SEIR employs the projections approach. For example, the analysis in Chapter 9, *Transportation*, relies substantially on the City/County Association of Governments of San Mateo County (C/CAG) Travel Demand Model, which encompasses growth projections to the year 2040.¹ The VTA-C/CAG model includes growth already assumed in the Redwood City General Plan, including its 2014 Housing Element and also including growth within the DTPP area that could be accommodated under the DTPP's existing assumptions and office and housing development caps. Similarly, the model includes assumed growth from other San Mateo County communities and those elsewhere in the Bay Area. Additionally, for this SEIR, the cumulative land use projections within Redwood City were updated to include preliminary assumptions underlying the City's in-progress General Plan Housing Element Update, which is intended to accommodate the City's recently assigned Regional Housing Needs Assessment (RHNA) allocation.² Finally, the 2040 cumulative growth projections also include growth anticipated in the SEIR that is in preparation for the proposed Transit District, a separate project that would create a sub-district within the amended DTPP area.³ This separate SEIR will evaluate effects of increased office and residential growth in the proposed Transit District, compared to growth assumed in the DTPP Final EIR, including DTPP amendments specific to the Transit District.

The above-described growth projections also largely underlie the cumulative analyses of other environmental topics evaluated quantitatively, including noise and vibration, air quality, and greenhouse gas emissions evaluated in the analysis of climate change. In contrast, and depending on which approach best suits the individual resource topic being analyzed, some topics employ a list-based approach, at least in part. For instance, the cumulative analyses of land use and aesthetics considers several individual projects that are anticipated or approved in the immediate vicinity of the amended DTPP area.

The following factors were used to determine an appropriate list of individual projects to be considered in the cumulative impact analysis where the list-based approach is used:

- ¹ C/CAG licenses the countywide model from the Santa Clara Valley Transportation Authority (VTA); as a result, the model is often referred to as the VTA-C/CAG Model.
- ² The RHNA process, which occurs in eight-year cycles, begins with the state Department of Housing and Community Development identifying a total number of new housing at a statewide level, broken down by income level, from very-low-income households all the way to market-rate housing, and to assign a share of this Regional Housing Needs Determination to each region of California. In the San Francisco Bay Area, the next step is for the Association of Bay Area Governments (ABAG), as the region's Council of Governments, to allocate a share of the required regional housing to each jurisdiction within the region, as well as growth associated with the Plan-wide Amendments to the General Plan and DTPP. For the 2023-2031 RHNA cycle, ABAG completed the regional allocation in December 2021. For Redwood City, the total RHNA allocation for 2023-2031 is 4,588 units, including 1,115 units affordable to very-low-income households; 643 low-income units; 789 moderate-income units; and 2,041 above-moderate-income (i.e., market-rate) units.
- ³ This chapter of the SEIR refers to the "amended DTPP area" to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

- **Similar Environmental Impacts**—A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project is defined as one that is “reasonably foreseeable,” such as a proposed project for which an application has been filed with the approving agency or has approved funding, or a project for which public agency staff has undertaken considerable planning that is widely acknowledged.
- **Geographic Scope and Location**—A relevant project is located within the geographic area within which effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects on regional air quality consists of the affected air basin.
- **Timing and Duration of Implementation**—Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the related effects of the proposed project.

17.1 Cumulative Development Assumptions

Since certification of the DTPP Final EIR, the following projects have been completed or are nearly complete in the amended DTPP area:

- 488 Winslow Avenue, Locale Apartments
- 620 Warren Street, Classic Communities townhomes
- Greystar I (299 Franklin Street), now the Franklin 299 Apartments;
- Greystar II (103 Wilson Street [1 Franklin Street]), now the Cardinal Apartments;
- Greystar III (1305 El Camino Real), now The Huxley Apartments;
- Greystar IV (1409 El Camino Real), now The Highwater Apartments;
- 612 Jefferson Street, Habitat for Humanity affordable townhouses;
- 900 Jefferson Avenue / 900 Middlefield Road (Box)
- 675 Bradford Street, Indigo Apartments
- 707 Bradford Street, Arroyo Green Apartments (affordable senior housing);
- 201 Marshall Street, apartments
- 601 Marshall Street, offices over retail;
- Broadway Station (2075 Broadway), offices over retail;
- 550 Allerton Street, offices;
- 815 Hamilton Street, offices over retail;
- 851 Main Street, offices over retail; and
- 929 Main Street, offices over retail

There are six projects in the amended DTPP area with applications on file that are being considered for the DTPP Plan-Wide Amendments as part of the “Gatekeeper” process initiated by the City Council as described in Chapter 3, *Project Description*. They include:

- 651 El Camino Real, residential and a replacement American Legion facility;

- 901 El Camino Real, offices over retail and a new teen center; off-site residential units;
- 2300 Broadway, offices over retail; off-site residential units;
- 603 Jefferson Avenue/750 Bradford Street, offices and residential;
- 1900 Broadway, offices and residential over retail; and
- 601 Allerton Street, offices over retail; off-site residential units

In addition to the six Gatekeeper projects, there are two other projects within the amended DTPP area that currently have applications on file:

- Sequoia Hotel (800 Main Street), rehabilitation and expansion of a historic hotel; and
- 1330 El Camino Real (“Redwood City Discovery”), residential
- Also on file, but not yet accepted by the City Council is a proposal for redevelopment of the Sequoia Station shopping center as a mixed-use development including office space and residential units, with much of the existing retail space to be replaced as ground-floor retail within the proposed new buildings. This proposed development is within the proposed Transit Center noted above.
- All of the foregoing projects are included in the analysis in this SEIR, with projects that were occupied prior to the most recent update of the VTA-C/CAG model included as part of the existing setting and the other projects included in the cumulative analysis of quantifiable issues such as transportation, air quality, greenhouse gases, and noise.

Also included in the cumulative analysis are other nearby projects that are proposed, approved, under construction, or recently completed, including 610 Walnut Street (offices, within the Downtown Medical Campus [Kaiser] Precise Plan); 353 Main Street (affordable residential); 849/855 Veterans Boulevard (residential), 1180 Main Street (offices); 1201 Main Street (offices and residential); the South Main Mixed-Use project (office, residential, and retail); and a hotel at 690 Veterans Boulevard. Also under construction (although outside Redwood City jurisdiction as a San Mateo County project) is the new San Mateo County Government Center, on the block bounded by Marshall, Hamilton, and Bradford Streets and Middlefield Road.

In addition, the Peninsula Corridor Joint Powers Authority, operator of Caltrain, is currently undertaking the Peninsula Corridor Electrification Project, described below.

- **The Peninsula Corridor Electrification Project** is a key component of the Caltrain Modernization (CalMod) Program and will electrify the corridor from San Francisco’s 4th and King Caltrain Station to the Tamien Caltrain Station, a distance of approximately 51 miles. Electrification improvements include converting diesel-hauled trains to electric trains, increasing service to six trains per peak hour per direction, and maintaining operating speed up to 79 miles per hour. The project would require the installation of 138 miles of overhead wires and supports for the distribution of electrical power to the trains. The project began construction in 2016 and revenue service is currently scheduled for late 2024, at which time approximately 75 percent of Caltrain’s current diesel fleet will be replaced by new electric trains. (Some trains traveling, including those traveling between San Francisco and Gilroy, will continue to use diesel locomotives.)

Beyond the projects listed above, there are two other major projects that are not funded, approved, or past the conceptual design phase. While the City cannot speculate as to whether these projects will be implemented, they are described below, as they are currently conceived, for informational purposes only:

- Expansion and Relocation of Redwood City Caltrain station.** The adopted Caltrain 2040 Long-Range Service Vision sets forth a minimum service level of eight trains per hour in each direction between San Francisco and Tamien Station in San José, doubling the existing maximum frequency of four trains per hour.⁴ As part of the ongoing planning effort for implementation of the Long-Range Service Vision, Caltrain has identified Redwood City as the preferred location for a four-track transfer station. Given Redwood City’s location approximately midway between San Francisco and San José, Caltrain anticipates that a Redwood City transfer station would play a key role in this expanded service by allowing for passengers to transfer between express and local trains. Accordingly, Caltrain is considering a proposal to relocate and expand the existing Redwood City Transit Center. According to a presentation given to a committee of the Caltrain Board of Directors in August 2021, “Strong ridership, high land use densities and a potential connection to a future Dumbarton service make Redwood City an ideal location for a potential four-track mid-Peninsula hub.”⁵ Any relocation and/or expansion of the Caltrain station would be undertaken by Caltrain as a separate project from the proposed DTPP Plan-Wide Amendments and would be subject to separate project-level CEQA review. However, through the proposed DTPP Plan-Wide Amendments, the City is taking proactive steps to plan for this station relocation.

In conjunction with relocation of the Caltrain station and Transit Center, the proposed Transit District DTPP Amendments SEIR, discussed above, assumes redevelopment of the existing Redwood City Transit Center with residential and office development (although Caltrain staff indicated in September 2022 that office development on this site is no longer being pursued).

- Grade Separation at Caltrain Rail Crossings.** Also, separate from the proposed DTPP Plan-Wide Amendments, the City is working with Caltrain to evaluate the six at-grade rail (Caltrain) crossings in Redwood City (Whipple and Brewster Avenues; Maple, Main, and Chestnut Streets; and Broadway) to address existing issues such as travel delay, safety, train noise, and the fact that at-grade crossings result, to some degree, in de facto barriers between neighborhoods.⁶ These issues are likely to become amplified with increased rail service and new track configurations. The City has not selected a preferred alternative, but is considering the following two options: a) grade-separate all crossings with Maple Street having bicycle and pedestrian access only and Chestnut Street having either full access or bicycle and pedestrian access only; and b) grade-separate the northern crossings only, leaving the southern crossings at-grade. While grade separations are not a part of the proposed DTPP Plan-Wide Amendments, and it is not currently known which, if any, of the six at-grade crossings might ultimately be converted to grade-separated crossings, this SEIR’s transportation analysis includes an evaluation of potential circulation changes that could result from grade separation,

⁴ Caltrain, *The Caltrain 2040 Long Range Service Vision*; adopted by the Caltrain Board of Directors, October 3, 2029. Available on the internet at: <https://caltrain2040.org/wp-content/uploads/Caltrain-Business-Plan-Final-Service-Vision.pdf>.

⁵ Caltrain, “Redwood City Planning and Redwood City Update,” presentation to the Work Program-Legislative-Planning Committee, July 28, 2021. Available on the internet at: <https://www.caltrain.com/Assets/6i+Redwood+City+Planning+and+Real+Estate+Update+PowerPoint.pdf>.

⁶ Crossings at Jefferson Avenue and Woodside Road are already grade-separated.

for informational purposes. Like a potential new Caltrain station, grade separation would be the subject of separate project-level CEQA review.⁷

17.2 Cumulative Impacts and Mitigation Measures

17.2.1 Land Use and Planning

Impact C-LU-1: The DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not result in cumulative impacts on land use and planning. (*Less than Significant*)

The DTPP Final EIR found that cumulative impacts related to land use and planning would be less than significant, as the project would not contribute substantially to either physically dividing an established community nor to conflicts with plans, policies, or regulations adopted to protect the environment. (The DTPP Final EIR also found that the DTPP would not result in cumulative effects related to incompatibility of land uses; however, this criterion has since been removed from the CEQA Checklist.)

The geographic scope for cumulative impacts on land use and planning includes the City of Redwood City and areas within approximately 0.5 miles of the amended DTPP area. Impacts from cumulative development projects outside of 0.5 miles from the amended DTPP area are not likely to combine with land use and planning impacts from the DTPP Plan-Wide Amendments because there are a variety of intervening land uses in between, thus, creating a buffer between the amended DTPP area and surrounding projects. Therefore, 0.5 miles is an appropriate search radius for this analysis.

Division of an Established Community

Development of cumulative transportation projects such as the Peninsula Corridor Electrification Project and relocation and expansion of the Caltrain station would include widening the Caltrain right-of-way in connection with potential future relocation and expansion of the Redwood City Caltrain Station and Transit Center. Similarly, the potential future Caltrain grade separation project could elevate the railroad corridor, creating a visual barrier, while also improving access across the railroad tracks. Construction of this cumulative project could also result in temporary detours, thus temporarily causing a physical division within the community. The train tracks currently represent a partial physical barrier because they only allow crossing from one side of the tracks to the other at specified at grade crossings when it is safe to do so. Widening and/or elevating this partial physical barrier as part of future projects could represent a cumulative impact on the physical division of an established community. However, the DTPP Plan-Wide Amendments would not contribute to this cumulative impact because it would not alter any of the existing at grade crossings and would extend a network of public streets through the site and include pedestrian and bicycle circulation enhancements. This would serve to ameliorate the

⁷ Depending on the grade separation option pursued, bicycle access could be provided across (beneath) the tracks, along the Broadway right-of-way and beneath the historic “Climate Best by Government Test” arch. This could entail removal/reconfiguration of the existing Arguello Plaza hardscape open space.

physical division caused by the existing train tracks, which would reduce the proposed DTPP Plan-Wide Amendments' contribution to a potentially significant cumulative impact.

The potential future Caltrain grade separation project would reduce the partial physical barrier created in the community by the railroad tracks. While construction of this cumulative project could result in temporary detours, thus temporarily causing a physical division within the community, the grade separations would ultimately allow safe and easy travel beneath the railroad corridor at all times, improving access, to, from, and through the amended DTPP area and vicinity.

Implementation of the Transit District DTPP Amendments, similar to the proposed DTPP Plan-Wide Amendments, would include features designed to encourage and promote public access, improve vehicular, bicycle and pedestrian circulation within the DTPP area, where limited access exists today, and encourage alternative modes of transportation besides automobile. As such, the DTPP Plan-Wide Amendments, in combination with the Transit District DTPP Amendments, would not include physical barriers or obstacles to circulation that would restrict existing patterns of movement within the DTPP area or with surrounding neighborhoods, and no cumulative effect would ensue.

Likewise, additional housing that would be constructed under the proposed Housing Element Update within the DTPP area, and other development projects that may occur within or near the DTPP area vicinity, would generally occur within the context of the existing or planned street grid, and would therefore not physically divide or sever existing connected parts of the community, or make it impossible or extremely inconvenient for a person to get from one part of the established community to a previously connected part of the community.

As such, the cumulative development would be urban infill in nature and, while increasing density, would be constructed on parcels that fit in with the existing framework of land use and circulation in the existing community, and therefore would not create physical barriers that would physically divide an established community. Specifically, both the DTPP Plan-Wide Amendments and Transit District DTPP Amendments would involve street vacations/closures that create a more pedestrian-oriented environment Downtown. All of these changes would enhance public access to and through the amended DTPP area.

Based on the above considerations, the DTPP Plan-Wide Amendments, in conjunction with other cumulative development within the vicinity, would not divide an established community and the DTPP Plan-Wide Amendments would not result in any increase in the physical barrier that results from the existing Caltrain tracks, while cumulative development, particularly if it were to include grade separation of the Caltrain tracks, would decrease the existing physical barrier in Downtown Redwood City. Therefore, there would be no new or more severe cumulative impacts than what was identified in the DTPP Final EIR. Cumulative impacts would be *less than significant*.

Conflicts with Plans Adopted for the Purpose of Avoiding or Mitigating Environmental Effects

The DTPP Plan-Wide Amendments would combine with growth in the amended DTPP area to increase the amount of office space, residential units, and open space in Downtown Redwood City. This growth would be largely consistent with both adopted local and regional plans, including the existing DTPP, the Redwood City General Plan, and *Plan Bay Area 2050*. As described in Chapter 5, *Population and Housing*, the Plan-Wide Amendments would be within the amount of overall planned growth in the General Plan.

Projected growth and the cumulative development projects would increase density in the area and, together with cumulative increases in transit infrastructure, would support the increased use of transit and other non-single-occupant vehicle modes of transportation. This would reduce the need for motor vehicle travel in the amended DTPP area and support the further revitalization of Downtown. This type and location of development is consistent with statewide, regional, and local plans that seek to accommodate increased population growth while achieving goals to reduce GHG emissions and other typical environmental effects of suburban sprawl and greenfield development. Specifically, the amended DTPP area is located within the “Redwood City Downtown” PDA, an area expressly designated for future housing and job growth by the City and the regional agencies because of its location in an existing community and within one-half mile of frequent transit. Thus, the DTPP Plan-wide Amendments implement, rather than conflict with, a plan intended to reduce environmental impacts.

Cumulatively, the Transit District DTPP Amendments within the DTPP area would also allow for compact growth adjacent to a high-quality transit corridor, within the same PDA. Likewise, additional high-density housing that would be developed within the DTPP area under the proposed Housing Element Update would also benefit from its location within the PDA and in proximity to transit options. As such, these cumulative projects would also be considered in furtherance of the goals of *Plan Bay Area 2050*, as well as the City’s General Plan and DTPP to reduce environmental effects.

Impacts related to conflicts with applicable land use plans, policies, or regulations of an agency with jurisdiction over the related projects generally are specific to the individual related projects; the impacts are not cumulative. However, the DTPP Plan-Wide Amendments, together with related cumulative projects, would indirectly result in development, including high-density residential, commercial, and transit-oriented development that would be concentrated in a Transit Priority Area. This type of development implements the transit-oriented development policies and would not conflict with plans adopted for the purpose of avoiding or mitigating an environmental effect. There would be no new or more severe cumulative impact than the impact identified in the DTPP Final EIR. Therefore, the cumulative impact would be *less than significant*.

17.2.2 Population and Housing

Impact C-PH-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would have a less than significant cumulative impact on population and housing. (*Less than Significant*)

The DTPP Final EIR found that cumulative population and housing impacts would be less than significant, as the DTPP would neither contribute considerably to unplanned growth nor contribute considerably to displacement of housing or people.

The geographic scope of the analysis of cumulative impacts related to population, employment, and housing includes Redwood City, with San Mateo County growth also discussed for context. Cumulative planned growth in the City is based on projections in the General Plan and Housing Element, and cumulative planned growth in the region is reflected in ABAG's *Plan Bay Area 2040*.

The recently (October 2021) adopted *Plan Bay Area 2050*, like *Plan Bay Area 2040* before it, calls for an increasing percentage of Bay Area growth to occur as infill development in areas with good transit access and where services necessary for daily living are provided in proximity to housing and jobs. With its abundant transit service and mixed-use Downtown, Redwood City is expected to accommodate an increasing share of future regional growth.

Cumulative projects would cumulatively increase the population and housing in Redwood City and the Region. *Plan Bay Area* anticipates the residential population in San Mateo County will increase by about 15 percent from 2020 to 2040, and that the number of jobs in San Mateo County will increase by more than 18 percent over the same period. The projected growth in Redwood City from 2020 to 2040 in the General Plan (22,319 residents and 29,302 jobs) would represent approximately 19 percent of the residential growth and approximately 40 percent of the job growth ABAG anticipates will occur in San Mateo County from 2020 to 2040. The proposed DTPP Plan-Wide Amendments alone would be responsible for approximately 10 percent of the residential growth and approximately 32 percent of the job growth ABAG anticipates will occur in Redwood City between 2020 to 2040. Thus, projected development pursuant to the proposed DTPP Plan-Wide Amendments in combination with General Plan projections would not exceed planned growth in the region.

As stated in Chapter 5, *Population and Housing*, it is not necessarily appropriate to consider jobs-housing balance at a project or area level. Rather, this analysis is more appropriate at a regional or sub-regional or county level, given the multitude of factors influencing people's choices of where to live and work. As described in Chapter 5, *Population and Housing*, the employment growth assumed to accompany the proposed DTPP Plan-Wide Amendments would indirectly generate demand for about 3,380 residential units, assuming that all the jobs would be new to Redwood City and the region and that no existing workers would relocate from other jobs. Together with indirect housing demand from the proposed Transit District sub-area of the DTPP, analyzed in a separate SEIR, indirect housing demand would total about 8,100 units, of which 6,170 units would constitute net demand when accounting for the two plans' 1,930 new units. Even

conservatively assuming all new employment, and further relying on the assumption—unrealistically conservative, based on existing and historical conditions—that all housing demand would be for housing in Redwood City, this demand could be largely met by new housing projected to be accommodated by the proposed Redwood City Housing Element, 2023-2031, which is the subject of yet another separate EIR.

One objective of the proposed DTPP Plan-Wide Amendments is to continue to allow for sustainable, transit-oriented office and residential development in the DTPP area. The proposed DTPP Plan-Wide Amendments would not: (1) induce population growth beyond that already planned, and (2) would not directly displace housing or necessitate the construction of replacement housing outside of the amended DTPP-area because with limited exceptions, the redevelopable sites in the area, such as the Gatekeeper Project sites, do not contain residential units; thus, no direct displacement would occur. Therefore, the proposed DTPP Plan-Wide Amendments would not result in new or more severe cumulative impacts related to growth inducement or displacement of housing and people than the impacts identified in the DTPP Final EIR. The cumulative impact would be *less than significant*.

17.2.3 Aesthetics and Visual Resources

Impact C-AE-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a significant impact related to aesthetics, light, glare, or shadow. (*Less than Significant*)

The DTPP Final EIR identified less-than-significant cumulative impact on aesthetics, light and glare, and shadow.

The geographic scope for cumulative impacts on aesthetics, light and glare, and shadow includes projects approved but not built, or projects that were the subject of a pending development application at the time the NOP was issued, within approximately 0.5 miles of the amended DTPP area. Impacts from cumulative development projects outside of 0.5 miles from the amended DTPP area are not likely to combine with the aesthetic or shadow impacts from the DTPP Plan-Wide Amendments because there are a variety of intervening buildings in between that create a visual buffer between the amended DTPP area and surrounding projects. Therefore, a 0.5-mile search radius is appropriate for this analysis.

Development of cumulative transportation projects such as the Peninsula Corridor Electrification Project and relocation and expansion of the Caltrain station would not introduce tall or bulky features that would obstruct scenic vistas from public vantage points, conflict with regulations governing scenic quality, or combine with the proposed DTPP Plan-Wide Amendments to result in light and glare, or shadow impacts.

The Caltrain grade separation project includes four alternatives for separating the Caltrain railroad from existing at-grade crossings. Within the amended DTPP area, the height of the

railroad could be up to 26 feet at the Brewster Avenue crossing under alternative 2, or no more than 0 feet above grade under alternative 4 at all crossings within the amended DTPP area. If alternatives 1 through 3 are selected, an elevated railroad would be constructed at the following crossings in the amended DTPP area: Brewster, Broadway, Maple, and Main. This could introduce above-ground infrastructure that could affect scenic views of the western hills. However, these infrastructure improvements would not be likely to conflict with applicable zoning and other regulations governing scenic quality, nor would it affect scenic views of the Downtown Redwood City skyline and the San Francisco Bay from four vantage points in the western hills: Easter Cross, Easter Bowl, Cañada College, and Edgewood Park and Natural Preserve. Therefore, the Caltrain grade separation project, in combination with cumulative projects, would not result in a significant impact on aesthetics.

As explained in the DTPP Final EIR, projects consistent with the amended DTPP area would contribute to a “mounding” of buildings concentrated near the center of Downtown, thus resulting in a more discernable and distinctive Downtown form and skyline. The proposed DTPP Plan-Wide Amendments would contribute to this “mounding” effect, which was seen as beneficial in the DTPP Final EIR, and therefore would not result in significant cumulative impacts on aesthetics. New development that would occur within the DTPP area under the cumulative Transit District DTPP Amendments, as well as additional housing that would occur in the DTPP area under the Housing Element Update, would further contribute to this mounding effect near the center of Downtown, and similarly would be seen as beneficial. In addition, the proposed DTPP Plan-Wide Amendments, the Transit District DTPP Amendments, or Housing Element Update would make any changes in allowable maximum building heights within the DTPP area.⁸ As such, these projects would not combine to create adverse aesthetic effects on scenic vistas or scenic resources, and the cumulative impact would be less than significant.

With respect to light and glare, the existing downtown area is already developed and well-lit, and the proposed development would be consistent with that status. Cumulative development projects would be required to meet the LZ3 (medium) lighting power allowances in the California Building Standards Code Title 24 (Parts 1 and 6 – Outdoor Lighting Zones), as would development in the amended DTPP area. Compliance with Title 24 standards would improve the quality of outdoor lighting and reduce the cumulative impacts of light pollution, light trespass and glare to less than significant levels.

Regarding shadow, cumulative development projects could combine with shadow effects of the DTPP Plan-Wide Amendments to result in a significant cumulative shadow effect. However, subsequent development projects built pursuant to the DTPP Plan-Wide Amendments would be subject to Mitigation Measure AE-5, which would require subsequent projects to demonstrate to the Redwood City Planning Services Division that the building height and disposition exceptions sought would be consistent with section 2.7.5 of the DTPP and would not result in shadow

⁸ As stated in Chapter 3, *Project Description*, if the potential future northerly extension of the DTPP boundary were to be permitted, the maximum building height of the five parcels in question—currently outside the DTPP area—would increase from 85 feet to 92 feet.

exceeding 50 percent on the shadow-sensitive uses and spaces at noon on the Spring Equinox.⁹ The shadow-sensitive uses and spaces considered in the analysis are listed in Section 6.3.3, Aesthetics. Development that would occur under other DTPP amendments including the Transit District and Housing Element would also be subject to a similar mitigation measure.

Therefore, with implementation of Mitigation Measure AE-5, subsequent development projects built under the DTPP Plan-Wide Amendments, in combination with cumulative projects would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR. The cumulative impact would be *less than significant*.

17.2.4 Cultural and Historic Resources and Tribal Cultural Resources

Impact C-CR-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would potentially result in significant cumulative impacts related to cultural, historic, and tribal cultural resources. (*Significant and Unavoidable*)

The DTPP Final EIR determined that anticipated cumulative development would have the potential to cause a substantial adverse change in one or more identified historic resource (i.e., through demolition, relocation, and/or alteration), which would be considered a significant and unavoidable cumulative impact.

The geographic scope for cumulative impacts on cultural and historic resources and tribal cultural resources includes the entirety of Redwood City.

As discussed in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, of this SEIR, the DTPP Plan-Wide Amendments is subject to the DTPP preservation requirements. Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR, which addresses locations in the DTPP area that contain a historic resource) may not be sufficient to reduce impacts from the DTPP Plan-wide amendments to historic resources to a less-than-significant level. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR, which requires that proposed development adjacent to historic resources requiring discretionary approval be reviewed by an architect or architectural historian) and Mitigation Measure CR-3 (formerly Mitigation Measure 7-1 from the DTPP Final EIR, which establishes inadvertent discovery protocol for cultural resources identified during project construction) would reduce impacts from the DTPP Plan-Wide Amendments to historic resources, archaeological resources, and tribal cultural resources to a less-than significant level. DTPP Final EIR Mitigation Measure 7-3 (which addresses impacts on historic districts) does not pertain to the DTPP Plan-Wide Amendments because there are no historic districts within the proposed amended DTPP area nor are there any historic districts adjacent to the proposed amended DTPP area. Additionally,

⁹ The City of Redwood City, *Downtown Precise Plan*, p. 89, Adopted on January 24, 2011. Last amended on June 11, 2018.

Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR, which imposes conditions of approval on all future projects involving demolition and construction activities in order to reduce ground-borne vibration levels) would reduce impacts from the DTPP Plan-Wide Amendments to nearby historic resources to a less-than-significant level.

Under the DTPP Plan-Wide Amendments, potential impacts to archaeological resources and tribal cultural resources would be mitigated to a less-than-significant level. Therefore, the DTPP Plan-Wide Amendments would not result in additional cumulative impacts to archaeological resources and tribal cultural resources. The amended DTPP area does not contain known historic resources or historic districts that are eligible for local listing, the California Register, and/or the National Register, and there are no adjacent historic districts. Therefore, development pursuant to the proposed DTPP Plan Amendments would not result in any significant effects to any newly identified historic resources. However, development pursuant to the proposed DTPP Plan Amendments could result in adverse effects to one or more resources previously identified in the DSTPP Final EIR, and there are no policies in the existing DTPP or proposed amendments that would explicitly prohibit such effects. Furthermore, implementation of the DTPP Plan-Wide Amendments could result in indirect impacts from construction vibration to one previously identified potential historic resource that is located adjacent to the amended DTPP area and outside of the DTPP boundaries (i.e., 701–713 Arguello Street).

There are historic resources, archaeological resources, and tribal cultural resources within the boundary of Redwood City that could be impacted by future projects. Although, there are no known immediate impacts to these resources from future development, there is the potential for known and potential historic resources to be demolished or otherwise adversely affected following an appropriate public process, including within the amended DTPP area. For example, although not certain at this time, potential changes to the historic Sequoia Hotel could adversely affect the character of that resources such that a significant impact under CEQA may ensue. When considered together with other projects within Redwood City, the potentially significant impacts to historic resources would potentially contribute to the significant cumulative impact identified in the DTPP Final EIR, and the cumulative impact related to historical resources would be *significant and unavoidable*; however, this would not represent new or more severe cumulative impacts than that identified in the DTPP Final EIR.

Mitigation: Implement Mitigation Measures CR-1, CR-2, and NO-3.

Significance after Mitigation: Even with the implementation of one or more of the mitigation measures established in the DTPP Final EIR and included in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, with clarifying amendments, the impact on historical resources by the DTPP Plan-Wide Amendments would remain potentially unavoidable. Therefore, the contribution of the DTPP Plan-Wide Amendments to cumulative impacts to historical resources would remain cumulatively considerable and thus *significant and unavoidable*. (No new significant impact, compared to DTPP Final EIR)

17.2.5 Public Services

Impact C-PS-1: Implementation of the DTPP Plan-Wide Amendments, combined with cumulative development in the vicinity and Citywide, would not result in an adverse cumulative increase in demand for public services that would require new or physically altered governmental facilities, construction of which could have significant physical environmental impacts. (*Less than Significant*)

The DTPP Final EIR found that cumulative development would result in increased demand of public services and new or expanded facilities could be required; however, since specific needs in terms of size, staffing, equipment, and location were unknown, associated impacts were deemed speculative and cumulative impacts related to public services were determined to be less than significant.

The geographic scope for cumulative impacts related to public services includes the City of Redwood City. The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would increase the demand for police services, fire protection and emergency medical response services, public schools, and libraries. Impacts on public services as an indirect result of the proposed DTPP Plan-Wide Amendments could combine specifically with the proposed Transit District development and the Housing Element Update development that is targeted for the DTPP area, as the projects have similar geographies and would therefore affect the same public service providers.

Cumulative development would result in additional RCPD calls for police service. Should RCPD determine that an additional police substation or community policing center is necessary within the amended DTPP area as a result of cumulative development, the facility would likely be incorporated into an existing or otherwise-planned structure similar to the existing Downtown Substation and would not result in significant environmental impacts.

Cumulative development would also result in additional RCFD calls for fire protection and emergency medical services. To the extent possible, the additional services would likely be incorporated into an existing or otherwise-planned structure and would not result in significant environmental impacts. It would require speculation to determine the specific needs in terms of size, staffing, equipment and location of any new RCFD facilities. If and when the construction or expansion of RCFD facilities to accommodate additional fire personnel or equipment becomes necessary as a result of cumulative development, CEQA review, General Plan provisions, and City and Zoning Code regulations would all apply, thereby avoiding significant environmental impacts.

With regard to public schools, similar to individual projects developed within the amended DTPP area, cumulative projects would be subject to school impact fees which would fully mitigate the potential effect on public school facilities from the new student population that may be generated by cumulative development. Any expansion of RCSD or SUHSD facilities would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities.

The projected demand as a result of cumulative development would be included in the scope of the RCPL's upcoming Downtown Library improvements study. Any Downtown Library facility expansion or improvements developed as a result of the RCPL's study and cumulative development would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities.

Therefore, when considered in the cumulative context, the DTPP Plan-Wide Amendments' public services-related impacts would not be cumulatively considerable and would not result in new or more severe cumulative impacts than what was identified in the DTPP Final EIR. Cumulative impacts would be *less than significant*.

Impact C-PS-2: Implementation of the DTPP Plan-Wide Amendments, combined with cumulative development in the vicinity and citywide, would not result in significant cumulative impacts to parks and recreation. (*Less than Significant*)

The DTPP Final EIR found that cumulative development under the DTPP would also be subject to applicable parkland dedication or in-lieu fee requirements, and new parkland could be provided inside or outside of the amended DTPP area in the future. However, specific parks and recreational facilities expansion needs were unknown and associated impacts were deemed speculative and as a result cumulative impacts on parks and recreational facilities were found to be less than significant.

The geographic scope for cumulative impacts related to parks and recreation is Citywide. The proposed DTPP Plan-Wide Amendments, in combination with cumulative projects in the vicinity would increase the demand for and use of parks and recreational facilities. Impacts on parks and recreation as a result of the proposed DTPP Plan-Wide Amendments could combine specifically with the proposed Transit District assumed development and with the Housing Element Update as the projects have similar geographies and would therefore affect similar parks and recreation facilities.

Cumulative projects, including individual projects allowed by the proposed Transit District Amendments, would be subject to the City's Parks Impact Fee and parkland dedication requirements (or Parkland In-Lieu Fee) as they are developed, the same as for the proposed DTPP Plan-Wide Amendments. The City's Parks Impact Fee and Parkland In-Lieu Fee would allow the City to purchase parkland, make park improvements, and provide recreation facilities to meet the demand generated by new residential development. As the residential population of Redwood City increases as a result of cumulative development, the construction of new parks and recreational facilities in the City would occur. The park projects developed as a result of the City's Parks Impact Fee and Parkland In-Lieu Fee would be required to undergo environmental review as they are identified. Appropriate measures would be identified and implemented as applicable to reduce any construction-related or operational effects of those facilities.

Additionally, as discussed in Chapter 8, *Public Services and Recreation*, Redwood City residents also use nearby regional recreation facilities at Bair Island and Edgewood Park and Nature Preserve to meet their recreational needs and new residents as a result of cumulative growth would be expected to use these facilities from time to time. However, given the expected infrequent use of these regional facilities associated with an incidental increase in demand from these cumulative projects, the relatively large capacity of the Edgewood Park and Nature Preserve, and continued on-going planning and improvement efforts by the San Mateo County Parks Department and other agencies of their regional park facilities, the increase in usage as a result of these projects would not result in a substantial cumulative deterioration of these facilities.

Therefore, when considered in the cumulative context, the DTPP Plan-Wide Amendments' parks and recreation-related impacts would not be cumulatively considerable and would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR. Cumulative impacts related to parks and recreation would be *less than significant*.

17.2.6 Transportation and Circulation

Impact C-TR-1: Implementation of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity and Citywide, would not result in a cumulatively considerable contribution to a significant transportation impact. (*Less than Significant*)

DTPP Impact Summary

The DTPP Final EIR identified a number of significant cumulative impacts related to intersection, freeway mainline, and freeway ramp operations. The significant cumulative intersection impacts were identified at the following 13 study intersections during either the AM and/or PM peak hour within the amended DTPP area:

- El Camino Real and Whipple Avenue (PM peak hour)
- El Camino Real and Jefferson Avenue (AM and PM peak hours)
- Main Street and Woodside Road (AM and PM peak hours)
- Middlefield Road and Jefferson Avenue (AM and PM peak hours)
- Middlefield Road and Main Street (AM and PM peak hours)
- Middlefield Road and Woodside Road (AM and PM peak hours)
- Broadway and Walnut Street (PM peak hour)
- Broadway and Chestnut Street (PM peak hour)
- Broadway and Woodside Road (AM and PM peak hours)
- Bay Road/Woodside Road (PM peak hour)
- Bradford Street and Main Street (AM and PM peak hours)

- Veterans Boulevard and Whipple Avenue (PM peak hour)
- Veterans Boulevard and Woodside Road (AM and PM peak hours)

Significant cumulative freeway segment impacts were identified for the following segments on US 101:

- Northbound US 101 between Marsh Road and Woodside Road (impact on mixed-flow lanes during both AM and PM peak hours; impact on HOV lane during the PM peak hour)
- Northbound US 101 between Whipple Avenue and Holly Street (impact on mixed-flow lanes during PM peak hour)
- Southbound US 101 between Holly Street and Whipple Avenue (impact on mixed-flow lanes during PM peak hour)
- Southbound US 101 between Woodside Road and Marsh Road (impact on mixed-flow and HOV lanes during both AM and PM peak hours)

A significant cumulative freeway ramp was identified for the following location:

- US 101 to Woodside Road diagonal freeway ramp (AM and PM peak hours)

The DTPP Final EIR identified mitigation measures (Mitigation Measures 9-10 through 9-22) to address the cumulative intersection impacts; however, only one of the study intersections where a significant impact was identified would be mitigated to a less-than-significant-level: Veterans Boulevard and Whipple Avenue. For the remaining 12 study intersections, a significant and unavoidable cumulative impact was identified due to the fact that the mitigation measures identified for those intersections would require approvals from an agency (Caltrans) other than the Lead Agency (Redwood City) that could not be guaranteed, or because of a General Plan policy conflict. Similarly, Redwood City's lack of authority to independently implement the mitigation measure identified to address significant cumulative impacts on the four study freeway segments and one freeway ramp location (Mitigation Measures 9-23 and 9-24) also lead to a significant and unavoidable impact determination.

The significant intersection and freeway segment impacts listed above were determined using the performance metric of delay/LOS. As noted under Section 9.2, *Regulatory Setting*, SB 743 and the resulting change to the CEQA Guidelines in section 15064.3, subdivision (b), vehicle LOS can no longer be used as a determinant of significant environmental impacts. VMT is now used as the primary performance metric to establish the significance of a transportation impact, and that impact analysis, which is modeled using a cumulative analysis year of 2040, is provided under Impact TR-2.

The DTPP Final EIR did not identify any significant cumulative impacts related to transit or bicycle and pedestrian facilities.

The geographic scope for cumulative transportation impacts includes the City of Redwood City.

Project Impacts

For the following reasons, the proposed DTPP Plan-Wide Amendments would not result in a cumulatively considerable contribution to a significant transportation impact with respect to conflicts with plans, ordinances, or policies; increases in VMT; increased hazards; or emergency access.

- As shown in Table 9-7, the proposed DTPP Plan-Wide Amendments would generate per capita (for residential uses) and per employee (for office uses) VMT under cumulative (Year 2040) conditions that are below the City’s thresholds of significance. The measure of VMT, as expressed by the VTA-C/CAG model, is by nature a cumulative measure, in that the VTA-C/CAG model includes all reasonably foreseeable cumulative development in the amended DTPP area.
- As discussed previously under Impact TR-1, the proposed DTPP Plan-Wide Amendments is consistent with the General Plan and other plans, policies, and ordinances related to transportation facilities. Approval of cumulative projects that could be developed in the amended DTPP plan area would also be dependent on consistency checks with the General Plan and other relevant plans, policies, and ordinances.
- The amended DTPP area is located in Downtown Redwood City near high-quality transit. These characteristics are beneficial with regard to VMT per capita/employee, reduced vehicle trips, and increased usage of non-auto transportation (walking, biking, and transit). Since cumulative projects that could be developed in the amended DTPP plan area would similarly be located in an area of the City that provides access to a robust network of transit, pedestrian, and bicycle facilities, any such projects would also be beneficial with respect to VMT per capita/employee, reduced vehicle trips, and increased usage of non-auto transportation.
- The same City design standards and requirements that must be met for individual project approvals identified under Impact TR-3 (increased hazards) and TR-4 (emergency access) would also apply to any and all other cumulative projects that could be approved/built in the amended DTPP area.

Project Effects on VMT

In addition to the Residential and Office VMT analysis, the proposed DTPP Plan-Wide Amendments’ cumulative effect on VMT was also analyzed using the “boundary method.” The boundary method evaluates VMT that occurs within a selected geographic boundary (e.g., city, county, or region). The selected regional boundary for this analysis includes all of Redwood City, as specified in the TAM.¹⁰ This captures all on-road vehicle travel on a roadway network for any purpose and includes local trips as well as trips that pass through the area without stopping.

An example of how a project can affect VMT is the addition of housing in a job-rich downtown. Workers in the downtown, an area that currently has limited housing options, must travel a greater distance between their home and work. Adding housing in downtown will result in shorter distances for many of the home-to-work trips and would, therefore, reduce VMT to/from the downtown. While the new housing itself will “generate” more daily vehicle trips, in that there

¹⁰ City of Redwood City, 2020. Redwood City Transportation Analysis Manual, July 21, 2020. Available at: <https://www.redwoodcity.org/home/showpublisheddocument?id=22106>; page 35.

will be more cars coming in and out of a newly developed residential site, it will generally attract those trips away from other residential developments located farther away. If the boundary VMT in the area served by the new residential development were to be assessed, it is likely that the total amount of driving in that area will have decreased rather than increased.

Table 17-1 presents the total citywide VMT under cumulative conditions in 2040 and the calculated citywide VMT per capita, based on the total VMT in Redwood City divided by the total service population (residents and employees).

**TABLE 17-1
BOUNDARY METHOD CITYWIDE CUMULATIVE VMT ESTIMATES AND IMPACT ASSESSMENT**

Scenario	Cumulative No Project	Cumulative + Project	Exceed VMT Threshold? ²
Vehicle Miles Traveled	2,044,200	2,059,300	n/a
Service Population	198,700	204,800	n/a
VMT per Capita ¹	10.3	10.1	No

NOTE:

¹ Per capita is defined by dividing total VMT by the sum of all employees, residents, and students.

² VMT threshold is exceeded if the Cumulative + Project VMT per capita is greater than the Cumulative No Project VMT per capita.

SOURCE: Redwood City DTPP Plan-Wide Amendments Transportation Analysis (Appendix C), 2022.

As shown in Table 17-1, the citywide VMT per capita under 2040 cumulative conditions without the proposed DTPP Plan-Wide Amendments would be 10.3 VMT per capita. Under 2040 cumulative conditions with the proposed DTPP Plan-Wide Amendments, the citywide boundary VMT per capita is estimated to be 10.1 miles, which would be less than the citywide VMT per capita without the Project. Therefore, the proposed DTPP Plan-Wide Amendments would not result in a cumulatively considerable contribution to VMT.

Grade Separations and VMT

With respect to the potential for future grade separations at Caltrain rail crossings, the cumulative year 2040 conservatively assumes current conditions, i.e., at-grade crossings at the six locations within Redwood City. The primary components in VMT calculations are the number of trips multiplied by the trip distance. It is not anticipated that the VMT for the proposed DTPP Plan-Wide Amendments would change substantially between a scenario in which the crossings are at-grade or fully grade separated, since the street network is a grid pattern with numerous alternative access routes, so associated trip lengths to/from the amended DTPP area would not change substantially; it is the potential delay at the crossings that would change.

In the scenario in which one or two of the southern grade crossings were to be closed to vehicle access (i.e., not grade-separated, although they would continue to allow bike/pedestrian crossing), any changes to grade crossing access at the southern end of the City would not be likely to result in any substantial changes to the proposed DTPP Plan-Wide Amendments' VMT per employee or VMT per resident, since the downtown and surrounding areas have a grid network that allows for multiple access routes of similar trip lengths. For example, for a trip starting at the Chestnut Street/Spring Street intersection and normally traveling down Chestnut Street over the grade

crossing to El Camino Real and then heading north to the amended DTPP area, the trip length is about one mile. If crossings were closed to vehicle access at Chestnut Street, one could travel down Chestnut Street and turn right onto Middlefield Street, to westbound Jefferson, and turn right onto northbound El Camino Real. The trip length for this route is just under one mile. Thus, the City's grid network allows for reasonable alternate routes that have very similar trip lengths and are not likely to change the VMT impact conclusions of the proposed DTPP Plan-Wide Amendments.

Conclusion

As discussed above, the proposed DTPP Plan-Wide Amendments would not result in a cumulatively considerable contribution to a significant transportation impact and would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR. Mitigation measures identified in the DTPP Final EIR to address cumulative intersection, freeway segment, and freeway ramp operations impacts (Mitigation Measures 9-10 through 9-24) *would not be applicable* to the proposed DTPP Plan-Wide Amendments due to the change in performance metrics used to determine a significant transportation impact, as required by SB 743 and CEQA Guidelines section 15064.3, subsection (b).¹¹ Therefore, the impact would be *less than significant*.

17.2.7 Utilities and Infrastructure

Impact C-UT-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity and Citywide, would not contribute considerably to cumulative impacts on utilities and service systems. (*Less than Significant with Mitigation*)

The DTPP Final EIR found that cumulative water distribution and wastewater conveyance needs would be determined through City planning and capital improvement programs, and if any improvements were identified construction of those improvements would not result in significant environmental impacts. The DTPP Final EIR also found that available wastewater treatment capacity would be adequate to serve cumulative development, and that cumulative impacts related to wastewater treatment would be less than significant.

The geographic scope for cumulative impacts related to utilities and infrastructure is Citywide. The proposed DTPP Plan-Wide Amendments, in combination with cumulative projects in the vicinity and Citywide, would increase the demand for water, wastewater conveyance and treatment, storm drainage, and energy systems infrastructure. Impacts on these infrastructure systems as a result of the proposed DTPP Plan-Wide Amendments could combine with the proposed Transit District Amendments as the resulting development would affect a similar area and would seek to access the same utility providers. Cumulative projects would be subject to applicable City development and utilities fees that would be collected by the City, construction of system improvements, and fair-share contributions to address the new utility system demand. The

¹¹ A Local Transportation Analysis (LTA) was prepared in parallel with this Draft SEIR for the DTPP Plan-Wide Amendments; the LTA analyzes non-CEQA transportation issues, including vehicle delay and LOS, for General Plan and Congestion Management Program consistency.

potential replacement or extension of utility infrastructure to serve cumulative development would be installed primarily in existing roadways and utility rights-of-way. Aside from short-term construction disturbance, no unusual or further environmental impacts would be generated beyond those identified elsewhere in this SEIR for overall construction activity associated with future development in the amended DTPP area (e.g., Chapter 11, *Noise and Vibration*, and Chapter 12, *Air Quality*). For these reasons, and because changes proposed to utilities infrastructure as part of future developments will be subject to the City's review and permitting process, the proposed DTPP Plan-Wide Amendments would not contribute considerably to a significant cumulative impact in this regard, and impacts would be less than significant.

Cumulative development projects would also be required to meet the required fire flow velocities and flow durations pursuant to the California Fire Code and Redwood City Engineering Standards, as would development in the amended DTPP area. In this regard, as explained under Impact UT-1 in Chapter 10, *Utilities and Infrastructure; Hydrology and Water Quality*, City staff has determined that the transmission and distribution systems are not sized to provide adequate flows and pressures under emergency service for future citywide development. Emergency water storage volume for emergency uses in a fire, earthquake, or a temporary shutdown of the San Francisco Public Utilities Commission Regional Water System (SFPUC RWS; wholesale water supplier to Redwood City) is also inadequate. Accordingly, Mitigation Measure UT-1, which would require each subsequent development project in the amended DTPP area to make a fair-share contribution to development of an emergency water supply for Downtown, would also apply to cumulative development. This mitigation measure would provide for water supplies in the case of drought and disaster-caused emergencies, such as a temporary interruption of water supplies due to an earthquake.

With respect to the issue of water supply, the WSE prepared for the DTPP Plan-Wide Amendments provided a cumulative analysis of the DTPP Plan-Wide Amendments' water demand within the overall cumulative water demand through 2045 based on current water supply planning. This analysis is described in detail in Impact UT-2 in Chapter 10, *Utilities and Infrastructure* and summarized here. Based on the City's 2020 UWMP, the total projected water demand within the Redwood City service area was estimated as the sum of the future water demands associated with: (1) population and employment growth within the Redwood City service area, which are consistent with the City's 2010 General Plan; and (2) the planned development projects that are supplemental to the 2010 General Plan and will require a General Plan amendment.¹² After accounting for the City's recycled water use, the remaining City demand for potable water is anticipated to be supplied by potable water from the SFPUC Regional Water System (RWS).

¹² It should be noted that some, but not all, of the growth from the Transit District DTPP Amendments or the DTPP Plan-Wide Amendments is explicitly included in the UWMP water demand projections. However, the UWMP overall growth projections are nevertheless conservative enough to fully accommodate the growth from both of these DTPP Amendments proposals. Please also note that there could be potential additional growth associated with implementation of the City's proposed Housing Element Update that would not be attributable to the Transit District DTPP Amendments or the DTPP Plan-Wide Amendments. However, since the Housing Element Update goals for housing production are aspirational and may not be fully realized, such additional growth would be considered speculative, and therefore not included in the City's future water demand projections.

As discussed in Impact UT-2, under the With Implementation of the Bay-Delta Plan Amendment scenario, substantial supply shortfalls are projected in dry years for all agencies that receive water supplies from the SFPUC RWS. For the City, supply shortfalls under the With Implementation of the Bay-Delta Plan Amendment are projected in single dry years (ranging from 32 to 40 percent) and in multiple dry years (ranging from 32 to 47 percent) through 2045. In contrast, under the Without Implementation of the Bay-Delta Plan Amendment scenario, the projected supply shortfalls would be substantially less than the projected supply shortfalls if the Bay-Delta Plan Amendment is implemented. For the City, supply shortfalls under the Without Implementation of the Bay-Delta Plan Amendment scenario are projected in single dry years (shortfalls ranging from 1 to 2 percent) and in multiple dry years (shortfalls ranging from 1 to 11 percent).¹³

Under either scenario, the City expects to meet these supply shortfalls through water demand reductions and other shortage response actions by implementation of its Water Shortage Contingency Plan (WSCP). Each stage of the City's WSCP requires declaration by the City Council once a governing body, such as SFPUC, has required a voluntary or mandatory reduction in water use due to water supply shortages or an emergency. Each stage includes implementation of a mandatory water allocation program, voluntary restrictions on end uses, as well as various agency actions.

As described in Impact UT-2, under the With Implementation of the Bay-Delta Plan Amendment scenario, the projected single dry year shortfalls would require implementation of Stage 4 or 5 of the City's WSCP, which, according to the 2020 UWMP, will reduce the shortage gap by 35 or 45 percent, respectively. The projected multiple dry year shortfalls would require implementation of Stage 4, 5 or 6 of the City's WSCP, which will reduce the shortage gap by up to 55 percent.

Furthermore, under the Without Implementation of the Bay-Delta Plan Amendment scenario, the projected single dry year shortfalls under this scenario would require implementation of Stage 1 of the City's WSCP, and the projected multiple dry year shortfalls would require implementation of Stage 1 or 2 of the City's WSCP, which would reduce the shortage by up to 15 percent.

With implementation of the WSCP, the City would be able to reduce the water shortage for each stage of a drought emergency. Like all water users in Redwood City, development within the amended DTPP area would also be subject to water use limitations in the WSCP in the event of water shortages resulting from dry years and implementation of the Bay-Delta Plan Amendment, should such limitations be imposed.

Additionally, as discussed in Impact UT-2, projects developed within the amended DTPP area would be required to comply with the CALGreen Code, which requires that new construction use high-efficiency plumbing fixtures and adequate irrigation control features. Redwood City Municipal

¹³ As discussed in the Regulatory Setting of Chapter 10, the SFPUC is implementing an Alternative Water Supply Planning Program (AWSP) to investigate and plan for new water supplies to address future long-term reliability challenges and vulnerabilities of its RWS. In addition, the City is in the early stages of evaluating groundwater as a potential backup water supply. As such, the presented shortfall projections are considered conservative as they likely underestimate the potential supply that will be available in the future because they do not account for these new water supply sources.

Code Section 38.52 also requires all new and existing commercial properties and new multi-family residential properties to use recycled water for irrigation.

As discussed in Impact UT-2, implementation of Mitigation Measure UT-2 would provide for extension of recycled water infrastructure to each development project under the proposed DTPP Plan-Wide Amendments. Also as discussed in Impact UT-2 and summarized above, with implementation of the WSCP, the City would have sufficient water supplies to accommodate the growth associated with the proposed DTPP Plan-Wide Amendments in combination with reasonably foreseeable future development. The proposed DTPP Plan-Wide Amendments would not make a considerable contribution to cumulative impacts on water supply.

Mitigation: Implement Mitigation Measures UT-1 and UT-2.

Significance after Mitigation: Less than Significant. (New significant but mitigable impact compared to DTPP Final EIR)

With regard to water supply, the proposed DTPP Plan-Wide Amendments, in combination with cumulative projects in the vicinity and Citywide, would result in additional demand for potable water. As explained under Impact UT-2 in Chapter 10, *Utilities and Infrastructure; Hydrology and Water Quality*, water demand projections for new development in Redwood City include both potable and recycled water uses to conform to Municipal Code requirements, with potable/recycled water ratio for indoor water use estimated to be 20/80 percent for office uses and 70/30 percent for residential uses; all landscape irrigation is assumed to be recycled water. Accordingly, Mitigation Measure UT-2 requires all development projects in the amended DTPP area to extend recycled water infrastructure to each project's location, and this measure would also be applicable to cumulative development projects.

Mitigation: Implement Mitigation Measure UT-2.

Significance after Mitigation: Less than Significant. (New significant but mitigable impact compared to DTPP Final EIR)

As further discussed in Chapter 10, the UWMP predicts water supply shortfalls in dry years and multiple dry year periods with or without the Bay-Delta Amendments, but that the shortage in supply can be closed by implementing the various stages of curtailment measures in the WSCP. Water demand associated with the proposed DTPP Plan-Wide Amendments and the other cumulative development was accounted for in the City's 2020 UWMP. Development in the amended DTPP area and the cumulative projects would be subject to the same drought-related curtailments in the WSCP as the City's other water customers and would be required to reduce its impacts to the City's water supply through extension of recycled water infrastructure (Mitigation Measure UT-2) and compliance with the California Green Building Standards Code and the Redwood City Green Infrastructure Plan. Development in the amended DTPP area, along with cumulative development, would not cause increased curtailment measures otherwise required in dry years because, as explained in Under Impact UT-2, the City's Water Shortage Contingency Plan would result in sufficient reductions in water use, and because the City's 2020 Urban Water Management Plan included projected water demand sufficient to accommodate growth associated

with the proposed DTPP Plan-Wide Amendments, as well as the proposed DTPP Plan-Wide Amendments and other cumulative growth through 2045.

Also, development in the amended DTPP area and cumulative projects would be required to pay applicable City development and water capacity fees, contribute fees to any SFPUC RWS Alternative Water Supply Planning Program funding mechanism that may be developed to alleviate future supply shortages, pay their fair-share towards necessary water system facilities, and construct water system capacity-enhancing improvements/upgrades to support the proposed development's water infrastructure needs. As a result, development in the amended DTPP area would not result in the City having to increase water supply curtailments to other water customers.

With development pursuant to the proposed DTPP Plan-Wide Amendments and other cumulative development, the City would experience substantial water shortages during multiple dry years whether or not the Bay-Delta Plan Amendment is implemented, although implementation of the Bay-Delta Plan Amendment would substantially worsen the shortfall. However, based on the foregoing, and considering that the demand for the DTPP Plan-Wide Amendments would amount to approximately 3.1 percent of the City's total water demand in the UWMP horizon year of 2045, the proposed DTPP Plan-Wide Amendments would not exacerbate the preexisting water supply reliability issues or contribute considerably to a cumulative increase in water shortfalls, and the impact would be *less than significant with mitigation*.

With regard to wastewater treatment capacity, cumulative projects would also generate additional wastewater treatment demand at the Silicon Valley Clean Water (SVCW) treatment plant. SVCW's Regional Environmental Sewer Conveyance Upgrade Program, which consists of replacing or rehabilitating various components of the existing wastewater treatment and conveyance system, including pipelines and pump stations to ensure reliable operation of the overall wastewater system, is currently under way. The City would collect wastewater treatment capacity fees from cumulative projects to reimburse SVCW for costs expended on the operation, capital repairs, and maintenance related to the City's service areas. As such, future upgrades are being added at SVCW's wastewater treatment plant and capacity fees would be collected by the City to address the cumulative wastewater demand. Based on the approximately 15 MGD average daily excess capacity at the SVCW treatment plant and the relatively minimal demand (0.27 MGD) associated with development as a result of the proposed DTPP Plan-Wide Amendments, the proposed DTPP Plan-Wide Amendments in combination with cumulative development would not result in an impact on wastewater treatment capacity that would be cumulatively considerable, and impacts would be less than significant.

Therefore, when considered in the cumulative context, the proposed DTPP Plan-Wide Amendments' utilities-related impacts would not be cumulatively considerable and would not result in new or more severe cumulative impacts than what was identified in the DTPP Final EIR. Cumulative impacts would, therefore, be *less than significant*.

Impact C-UT-2: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity and Citywide, would not contribute considerably to cumulative impacts on solid waste. (*Less than Significant*)

The DTPP Final EIR found that while cumulative development would result in increased generation of solid waste, the Ox Mountain landfill would have adequate capacity to serve cumulative development along with diversion programs and cumulative impacts related to solid waste were determined to be less than significant.

The proposed DTPP Plan-Wide Amendments, in combination with Housing Element Update and cumulative projects in the vicinity and Citywide, would increase the generation of solid waste. Impacts on solid waste as a result of the proposed DTPP Plan-Wide Amendments could combine specifically with development as a result of the proposed Transit District Amendments, since that development is in the same area and would use the same solid waste disposal facilities. While the Ox Mountain Landfill has an expected closure date of 2034 (or 2038 according to the County's most recent review of the CIWMP in 2019), San Mateo County is currently revising the Siting Element of its Countywide Integrated Waste Management Plan, which will identify facilities and proposed programs that would provide San Mateo County with sufficient disposal capacity to meet the statutorily required minimum of 15 years of combined permitted disposal capacity (Public Resources Code Section 41260).

Cumulative development projects would also be required to comply with federal, state, and local solid waste standards, including waste diversion during construction, including at least 65 percent construction and demolition waste diversion, and during operation, including recycling and organic material diversion requirements. As such, non-renewable sources of solid waste and the solid waste disposal requirements of cumulative development would be reduced. Therefore, when considered in the cumulative context, the proposed DTPP Plan-Wide Amendments' solid waste-related impacts would not be cumulatively considerable and would not result in new or more severe cumulative impacts than what was identified in the DTPP Final EIR. Cumulative impacts would, therefore, be *less than significant*.

Impact C-UT-3: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity and Citywide, would not contribute considerably to cumulative impacts on hydrology and water quality. (*Less than Significant*)

The DTPP Final EIR determined that there would be a less-than-significant impact as it relates hydrology and water quality. While future developments in the amended DTPP area could contribute cumulatively to hydrology and water quality impacts, all new developments would be subject to the same local and state laws and regulations. The DTPP further determined that compliance with these laws would address any potential impacts to hydrology and water quality. As all new development pursuant to the proposed DTPP Plan-Wide Amendments would be subject to the same local and state laws (i.e., the City, County, and the RWQCB), the cumulative

impacts to related to hydrology and water quality from implementation of the proposed DTPP Plan-Wide Amendments would not be considerable and would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR. Cumulative impacts would therefore be *less than significant*.

17.2.8 Noise and Vibration

Impact C-NO-1: Implementation of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity, would not contribute considerably to cumulative noise impacts. (*Less than Significant*)

The DTPP Final EIR identified less-than-significant impacts that would result from increased traffic noise due to development pursuant to the DTPP.

The geographic scope for cumulative noise impacts includes the amended DTPP area and nearby streets, as explained below.

Potential vehicular traffic noise increases from cumulative (2040) conditions¹⁴ plus implementation of the proposed DTPP Plan-Wide Amendments were evaluated and compared to the existing traffic noise levels.

Noise levels along the 20 street segments within and surrounding the amended DTPP area analyzed in the transportation analysis were quantitatively modeled and the modeling results are presented in **Table 17-2**. Roadway segment link volumes at these study locations were developed for the existing and 2040 cumulative conditions. The roadways segments were selected as they represent roadways expected to be most likely used to access the amended DTPP area and therefore be affected by vehicle traffic changes.

The significance of cumulative impacts related to traffic noise levels is determined using a two-step process. First, similar to the project-level assessment of traffic impacts, the cumulative analysis considers whether traffic noise levels between cumulative (2040) conditions with the amended DTPP area and existing baseline (2020) conditions would be exceed the 3 dBA or 5 dBA threshold, as applicable, based on the existing noise level. If the roadside noise levels would exceed this incremental threshold, a cumulative noise impact would occur.

If a cumulative noise impact would occur based on the above methodology, the second step would evaluate whether the contribution of the proposed DTPP Plan-Wide Amendments to roadside noise levels would be cumulatively considerable. This second step (if necessary) involves assessing whether the proposed DTPP Plan-Wide Amendments' contribution to roadside noise levels (i.e., the

¹⁴ As discussed at the beginning of this chapter, the 2040 traffic projections rely on the C/CAG Travel Demand Model, which includes growth already assumed in the 2010 General Plan and by other jurisdictions, and augmented to include traffic from the proposed Transit District DTPP Amendments and Redwood City Housing Element Update.

**TABLE 17-2
CUMULATIVE TRAFFIC NOISE INCREASES ALONG ROADWAYS IN THE PLAN VICINITY**

Roadway Segment	Existing Conditions	Existing plus DTPP Plan-Wide Amendments Implementation plus cumulative (2040)	Change in Noise Level Compared to existing (dB)	Cumulative No Project (2040)	Change in Noise Level Compared to No Project (dB)	Significant?
Weekday Peak-Hour Noise Levels dBA						
Maple St from El Camino Real to Main St	49.1	53.6	4.5	53.5	0.1	No
James Ave from Clinton St to El Camino Real	60.8	54.1	-6.7	54.1	0.0	No
Jefferson Ave from Clinton St to El Camino Real	63.6	65.0	1.4	65.0	0.0	No
Jefferson Ave from El Camino Real to Sequoia Station	69.7	71.0	1.3	71.1	-0.1	No
Broadway from El Camino Real to Perry St	59.8	62.4	2.6	62.0	0.6	No
Broadway from Perry St to Arguello St	61.9	63.9	2.0	60.2	3.7	No
Broadway from Arguello St to Winslow St	60.3	62.1	1.8	61.8	0.3	No
Broadway from Winslow St to Jefferson Ave	53.9	56.2	2.3	56.3	0.1	No
Broadway from Jefferson Ave to Main St	63.3	66.5	3.2	67.1	-0.6	No
Broadway from Main St to Spring St	61.3	64.1	2.8	64.5	-0.4	No
Marshall St from Arguello St to Winslow St	48.3	49.6	1.3	47.1	2.5	No
Brewster Ave from Fulton St to Broadway	54.2	56.1	1.9	56.5	-0.4	No
Brewster Ave from Broadway to El Camino Real	49.2	56.4	7.2	56.4	0.0	No
Middlefield Road from Jefferson Ave to Main St	59.8	62.0	2.2	62.2	-0.2	No
Middlefield Road from Main St to Maple St	63.0	65.17	2.1	65.3	-0.2	No
Middlefield Road from Beech St to Chestnut St	60.2	62.4	2.2	62.5	-0.13	No
Veterans Boulevard from Brewster Ave to Jefferson Ave	67.2	67.1	-0.1	66.9	0.2	No
Veterans Boulevard from Jefferson Ave to Main St	62.2	64.3	2.1	63.8	0.5	No
Veterans Boulevard from Main St to Maple St	61.8	65.2	3.4	64.7	0.5	No
Winslow St from Marshall St to Brewster Ave	51.4	52.5	1.1	51.9	0.6	No

NOTE: dBA = A-weighted decibels; **Bold** values indicate exceedance of applicable threshold.

SOURCES: Traffic data compiled by Fehr & Peers in 2022, and noise modeling performed by Environmental Science Associates in 2022.

difference between cumulative conditions and cumulative plus project conditions) would exceed a 1.5 dBA incremental contribution; this is a threshold that is considered to be cumulatively considerable. The 1.5 dBA increase used to represent a cumulatively considerable contribution is conservatively based on the minimum increase identified as potentially significant by the Federal Interagency Committee on Noise.¹⁵ As stated in Chapter 11, *Noise and Vibration*, except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived. Consequently, a cumulatively considerable contribution would reasonably be more than 1 dBA.

As shown in Table 17-2, project-generated vehicular traffic would increase traffic noise along the 20 modeled segments would be less than 3 dBA except along four roadway segments. Some segments would experience a decrease in noise from traffic being redistributed as a result of new roadway connections. As shown in Table 17-1, a cumulative roadway noise impact is predicted to occur along Broadway from Jefferson Street to Main Street (an increase of 3.2 dBA), Brewster Avenue from Broadway to El Camino Real (an increase of 7.2 dBA), and Veterans Boulevard from Main Street to Maple Street (an increase of 3.4 dBA). However, when compared to the 2040 cumulative baseline condition without the proposed DTTP Plan-Wide Amendments, the noise levels along all three of these roadways are predicted to either decrease as traffic would be

redistributed as a result of new roadway connections within the amended DTPP area, or to increase less than 1.0 dBA and therefore represent a less than considerable contribution to the cumulative roadway noise impact. The traffic noise associated with the proposed DTTP Plan-Wide Amendments would not represent a cumulatively considerable contribution to this cumulative impact and would, in some cases, would serve to reduce this predicted significant cumulative impact.

Therefore, while there would be a cumulative traffic noise impact along four of the 20 roadways analyzed, the proposed DTTP Plan-Wide Amendments would not contribute to this cumulative impact and would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR. The cumulative traffic noise impacts resulting from the proposed DTTP Plan-Wide Amendments would be *less than significant*.

17.2.9 Air Quality

Impact C-AQ-1: Adoption of the proposed DTPP Plan-Wide Amendments would result in a cumulatively considerable contribution to the regional cumulative air quality impacts. (*Significant and Unavoidable with Mitigation*)

DTPP Impact Summary

The DTPP Final EIR concluded that due to the DTPP's consistency with the applicable Clean Air Plan at the time, and because the projected increase in vehicle use (i.e., VMT or vehicle trips) under the DTPP was found to be less than its projected population increase, the DTPP would

¹⁵ Federal Interagency Committee on Noise, Federal Agency Review of Selected Airport Noise Analysis Issues, August 1992.

represent a less than considerable contribution to the significant cumulative air quality of the region, and thus a *less-than-significant impact*. As discussed under Impact AQ-1 and Impact AQ-2 (see Chapter 12, *Air Quality*, these conclusions remain valid for the proposed DTPP Plan-Wide Amendments, however when the potential emissions associated with development allowed by the DTPP Plan-Wide Amendments are considered, the impact associated with criteria pollutant emissions is significant and unavoidable with mitigation, as discussed below.

Project Impacts

The analysis of criteria pollutants is by definition cumulative, considering emissions in the context of cumulative emissions in the San Francisco Bay Area Air Basin (SFBAAB) as a whole. Impact AQ-1 addresses potential impacts related to consistency with the BAAQMD 2017 Clean Air Plan. Because the 2017 Clean Air Plan focuses on reducing population exposure to air pollutants throughout the region, the assessment in Impact AQ-1 is a cumulative analysis in itself as it assesses consistency with a region wide air quality plan. Therefore, a separate cumulative assessment of consistency with the 2017 Clean Air Plan is not required.

Due to the SFBAAB's nonattainment status with respect to ozone and fine particulate matter, a significant cumulative air quality impact exists. As discussed under Impact AQ-2, while the proposed DTPP Plan-Wide Amendments' impact on regional air quality would be less than significant when analyzed at a plan level, individual project developments that are implemented under the proposed DTPP Plan-Wide Amendments could result in criteria pollutant emissions that constitute significant and unavoidable impacts following mitigation. Because criteria pollutant emissions are regional pollutants, this impact is by definition a significant cumulative impact and is not repeated here. However, as explained in the conclusion under Impact AQ-2, even with implementation of Mitigation Measure AQ-2b, it cannot be stated with certainty that criteria air pollutant impacts associated with all subsequent development projects would be reduced to less-than-significant levels. While this would likely be true only for relatively large projects and projects with substantial ground disturbance, specialty construction equipment, or compressed and highly intensive construction schedules, and while all future development projects would benefit from their proximity to transit facilities and would be subject to the requirements in the City's Reach codes to reduce operational nitrogen oxide emissions by eliminating natural gas use in new construction, ROG emissions from consumer products from large residential projects may remain significant as it is infeasible to impose mitigation on choice of consumer products and habits. For these reasons, criteria pollutant emissions from construction and operation of subsequent projects in the amended DTPP area would be ***significant and unavoidable with mitigation***, on a cumulative basis and would be a new impact not previously identified in the DTPP Final EIR. As discussed in Chapter 12, the identification of this significant and unavoidable cumulative impact does not preclude the finding of a less-than-significant or less-than-significant-with-mitigation impact for certain subsequent development projects.

Mitigation: Implement Mitigation Measures AQ-2a and AQ-2b.

Significance after Mitigation: Significant and Unavoidable. (New significant and unavoidable impact compared to DTPP Final EIR)

Impact C-AQ-2: Adoption of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to local health risk impacts. (*Less than Significant with Mitigation*)

DTPP Impact Summary

The DTPP Final EIR concluded that compliance with policies and programs in the Draft 2010 General Plan would prevent new development from exposing sensitive receptors to significant TAC levels. These policies require incorporation of design and construction features to reduce exposure to TACs below BAAQMD thresholds and provide guidance for siting of new sensitive receptors in the vicinity of existing sources of TACs. With these policies, the DTPP Final EIR concluded that cumulative health risk impacts related to TACs would be less than significant. As discussed in Chapter 12, *Air Quality*, CEQA no longer considers impacts of the environment on the project unless the project would exacerbate an existing impact, and the analysis of the DTPP Plan-Wide Amendments focuses on the possibility that development projects allowed by the DTPP Plan-Wide Amendments could result in significant health risks due to TAC emissions associated with construction and/or operation.

Project Impacts

Projects proposed within the amended DTPP area and within the 1,000-foot zone of influence¹⁶ of nearby receptors would contribute to the existing cumulative health risk to these receptors from nearby stationary and mobile sources. However, the timeline for the construction of these projects is currently unknown. Mitigation Measure AQ-3a would require all subsequent projects proposed under the DTPP Plan-Wide Amendments to conduct a project-level HRA at the time of project review to determine if BAAQMD health risk thresholds would be exceeded by project construction emissions and implement measures identified in mitigation Measure AQ-2b to reduce impacts to a less-than-significant level. Mitigation Measures AQ-3b and AQ-3c would reduce project operational health risk impacts to a less-than-significant level by requiring by requiring health risk assessments for laboratory emissions and reducing diesel truck loading emissions. Therefore, the contribution of projects proposed under the DTPP Plan-Wide Amendments to the cumulative health risk are also not likely to be considerable and would not result in new or more severe cumulative impacts than the impact identified in the DTPP Final EIR. Cumulative impacts would therefore be considered ***less than significant with mitigation***.

Mitigation: Implement Mitigation Measures AQ-3a, AQ-3b, and AQ-3c.

Significance after Mitigation: Less than Significant. (New significant but mitigable impact compared to the DTPP Final EIR)

¹⁶ The BAAQMD recommends evaluating sources within a 1,000-foot radius from the property line of a receptor when analyzing health risks to the receptor.

Impact C-AQ-3: Adoption of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to local odor impacts. (*Less than Significant*)

DTPP Impact Summary

The DTPP Final EIR concluded that compliance with policies and programs and implementation of DTPP Final EIR Mitigation Measure 12-2 (Odor Impacts of Mixed-Use Development), the exposure of receptors within the amended DTPP area to odors would represent a less than considerable contribution to the significant cumulative impact related to odors, and thus a less-than-significant impact.

Project Impacts

As discussed under Impact AQ-4, the amended DTPP area does not contain any major sources of odor that would contribute to a cumulative odor impact in the vicinity. DTPP Final EIR Mitigation Measure 12-2 would effectively be addressed through compliance with BAAQMD Rule 6-2 (Commercial Cooking Equipment). Therefore, the proposed DTPP Plan-Wide Amendments' cumulative impact with respect to odors would not result in new or more severe cumulative impacts than what was identified in the DTPP Final EIR. Cumulative impacts would not be considerable and therefore would be *less than significant*.

17.2.10 Climate Change

Impact C-CC-1: Implementation of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would result in a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies or regulations adopted for the purpose of reducing the emissions of greenhouse gases. (*Significant and Unavoidable with Mitigation*)

Global GHG emissions and global climate change are inherently a cumulative concern that is understood for CEQA purposes to be an existing significant and adverse condition. Accordingly, the significance of GHG emissions is determined based on whether such emissions would have a cumulatively considerable impact on global climate change. Because the geographic scope of cumulative impacts related to GHG emissions (i.e., global climate change) is global, the proposed DTPP Plan-Wide Amendments' direct and indirect generation of GHG emissions contribute to this cumulative impact. The California Air Pollution Control Officers Association (CAPCOA) considers GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate. Therefore, the evaluation of cumulative GHG impacts presented in Chapter 13, *Climate Change*, considers whether the proposed DTPP Plan-Wide Amendments would make a considerable contribution to cumulative emissions of GHG. As indicated in Chapter 13, implementation of the proposed DTPP Plan-Wide Amendments would result in a significant and unavoidable impact with mitigation.

Implementation of Mitigation Measure CC-1 would ensure substantial consistency with the state’s 2030 and 2045 GHG reduction goals. However, as explained under Impact CC-1, the City Council in 2020 adopted the Redwood City Reach Codes, which permit certain exceptions to prohibitions on the use of natural gas, as local policy following staff’s extensive outreach, consideration of other examples, and public input. Therefore, this SEIR assumes that the Reach Codes would remain as written for at least the immediate future, meaning that projects that receive exceptions to the Reach Codes would not be fully consistent with the BAAQMD’s adopted GHG significance thresholds, and, as a result, the DTPP Plan-Wide Amendments would conflict with applicable reduction plans and policies. Given that GHG emission impacts are cumulative in nature, the Project’s incremental contribution to significant cumulative GHG emissions would be ***significant and unavoidable with mitigation*** and would result in a new impact not identified in the DTPP Final EIR.

Mitigation Measure: Implement Mitigation Measure CC-1.

Significance after Mitigation: Significant and Unavoidable. (New significant and unavoidable impact compared to DDTTP Final EIR)

Impact C-CC-2: The proposed DTPP Plan-Wide Amendments, in conjunction with past, present, existing, approved, pending, and reasonably foreseeable future projects in the City, would not result in energy use that would be considered wasteful and unnecessary or conflict with or obstruct a state or local plan for renewable energy or energy efficiency under cumulative conditions. (*Less than Significant*)

Impacts of the proposed DTPP Plan-Wide Amendments related to the wasteful, inefficient, or unnecessary consumption of energy during construction and operation and the potential to conflict with or obstruct adopted energy conservation plans or violate energy efficiency standards are discussed under Impact CC-3 in Chapter 13, *Climate Change*. Energy consumption effects related to individual projects allowed by the DTPP Plan-Wide Amendments combined with continued growth in the City of Redwood City and throughout PG&E and PCE’s service areas could contribute to ongoing increases in demand for electricity and natural gas, which are discussed below.

The proposed DTPP Plan-Wide Amendments, in conjunction with cumulative development in the City, would indirectly result in increased development in an already developed area and result in increased energy consumption. Potential impacts to energy resources from future development in the City and the amended DTPP area would be site-specific and would require applications for development permits that would be evaluated for code compliance on a case-by-case basis. Thus all subsequent development projects in the City and the amended DTPP area would be subject to compliance with all federal, state, and local requirements for energy efficiency, including the California Energy Code Building Energy Efficiency Standards (CCR Title 24, Part 6), the CALGreen Code (CCR Title 24, Part 11), and SB 743. Consequently, subsequent projects in the City and the amended DTPP area would not result in significant environmental impacts from the wasteful, inefficient, or unnecessary consumption of energy resources during construction or

operation; and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the proposed DTPP Plan-Wide Amendments' would not result in new or more severe cumulative impacts than were identified in the DTPP Final EIR and the cumulative energy impact would be *less than significant*.

17.2.11 Hazards and Hazardous Materials

Impact C-HAZ-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would result in less-than-significant cumulative impacts related to hazards and hazardous materials. (*Less than Significant*)

The DTPP Final EIR determined that new development within the amended DTPP area would include subsequent projects that may use, store, or dispose of potentially hazardous materials (i.e., common household and commercial cleaners, paints, pesticides, etc.). These materials would typically not be used, stored, or disposed of in quantities that would pose a significant hazard to the public or environment. Additionally, construction activities associated with subsequent development projects, or other development associated with the Housing Element Update or Transit District, could potentially encounter hazardous materials from prior contamination (such as asbestos, lead based paint, PCB containing materials, contamination sites or underground storage tanks). However, the DTPP Final EIR determined that potential impacts would be adequately addressed by the existing laws, regulations, and policies in place to address impacts related to hazardous materials, and cumulative impacts related to hazards and hazardous materials would be less than significant. Because the regulatory regime has not changed substantially since the DTPP Final EIR was certified, this conclusion remains valid.

The geographic scope for cumulative impacts related to hazards and hazardous materials includes the amended DTPP area and locations within approximately 0.5 mile. This is because impacts relative to hazards and hazardous materials are generally site-specific and depend on the nature and extent of the hazards and hazardous materials released, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller more localized area surrounding the immediate spill location and extent of the release, and could only be cumulative if two or more hazardous materials releases spatially and temporally overlapped.

As discussed in Chapter 14, *Hazards and Hazardous Materials*, the potential impacts associated with hazards and hazardous materials would be adequately mitigated through compliance with existing laws, regulations, and policies. Other projects and developments being implemented in the surrounding area (either past, present, or future) would—or have already—complied with best management practices and similar mitigation measures as the ones required as part of the DTPP Plan-Wide Amendments to prevent releases, contain and cleanup spills. Additionally, other projects will be required to comply with the same existing laws and regulations that development allowed by the proposed DTPP Plan-Wide Amendments will comply with. Further, all new development within the amended DTPP area and surroundings would be subject to existing laws and regulations. If cumulative development were to occur in the same area, even in the event of

an upset or accident, the hazards and hazardous materials impacts would be less than significant because of the small quantities of materials used (such as paints, solvents, cleaning products, fuels, lubricants, adhesives, sealers and pesticides/herbicides).

With respect to the potential for multiple R&D Laboratory uses to operate within the DTPP Plan area under the proposed DTPP Plan-Wide Amendments, each R&D Laboratory development would need to acquire the applicable hazardous materials-related permits specific for that development; register the hazardous materials specific for that development through the County's Hazardous Materials Business Plan Program; comply with those Cal/OSHA worksafe safety standards specific to that development; and have their development equipped with adequate fire protection and hazardous material safety provisions appropriate for that development to minimize potential impacts of hazardous materials. This would ensure these potential individual R&D Laboratory developments would not contribute considerably to cumulative hazardous materials impacts.

Compliance with existing regulations would reduce the potential cumulative hazard impacts to less than significant. Implementation of the proposed DTPP Plan-Wide Amendments would not result in new or more severe cumulative impacts than the impacts identified in the DTPP Final EIR.

Because the proposed project would result in a less than significant hazardous waste impact, the project's contribution to cumulative hazardous waste impacts would be less than cumulatively considerable. Cumulative impacts would therefore be *less than significant*.

17.2.12 Biological Resources

Impact C-BIO-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would result in less-than-significant cumulative impacts related to biological resources. (*Less than Significant*)

The DTPP Final EIR determined that anticipated cumulative development would not have the potential to cause a substantial adverse change in significant biological resources due to the low existing habitat values within the amended DTPP area. The geographic scope for cumulative impacts on biological resources includes the amended DTPP area in downtown Redwood City, and the anticipated future DTPP Plan-Wide northerly boundary extension area, as shown in Figure 3-2. Impacts to biological resources within this area are related to development, and the noise and disturbance from construction, which are localized effects. Therefore, this is an appropriate boundary for this analysis.

Implementation of the DTPP Plan-Wide Amendments have the potential to impact special-status wildlife species, protected nesting birds, or sensitive riparian habitat; these potential impacts would be mitigated to a less-than-significant level with implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-2a, BIO-2b, and BIO-5. While other projects in the downtown Redwood

City area may similarly have potential to impact biological resources, these projects would also be subject to the requirements of the MBTA, California Fish and Game Code, and the City's tree preservation ordinance. Therefore, the proposed DTPP-Plan-Wide Amendments would not combine with cumulative projects to result in a cumulative impact related to biological resources and would not result in new or more severe cumulative impacts on biological resources than the impact identified in the DTPP Final EIR. Cumulative impacts would be *less than significant*.

17.2.13 Geology and Soils

Impact C-GEO-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would result in less-than-significant cumulative impacts related to geology and soils. (*Less than Significant*)

The DTPP Final EIR determined that, while new developments within Redwood City would be subject to geologic and soil-related hazards (i.e., seismic ground shaking, etc.), the potential risks to life and property as a result of these hazards would be adequately mitigated by existing laws, regulations, and policies (i.e., compliance with the California Building Code). On this basis, the DTPP Final EIR determined that cumulative impacts related to geology and soils would be less than significant. Because there have been no changes in soil conditions, this conclusion remains valid.

The geographic scope for cumulative impacts on geology and soil resources includes the expanded DTPP area and areas immediately adjacent to it because the direct geology and soil impacts are site specific and people and structures within the amended DTPP area could be exposed to indirect hazards from unstable structures immediately adjacent to the DTPP area. Other projects and developments being implemented in the area (either past, present, or future) will be required to comply with the same existing laws and regulations that future developments allowed under the proposed DTPP Plan-Wide Amendments will comply with. Additionally, Mitigation Measures GEO-2, GEO-4a, and GEO-4b would ensure potential geotechnical hazards within the DTPP Plan-Wide Amendments are addressed prior to construction and Mitigation Measure GEO-6 would ensure potential impacts to paleontological resources are addressed within the DTPP Plan-Wide Amendments. All new development within the amended DTPP area and vicinity would be subject to existing laws and regulations, including the California Building Code, and activities within the amended DTPP area would be subject to the included mitigation. Conforming to these requirements would reduce potential impacts (such as liquefaction, lateral spreading, or subsidence) for future cumulative development to the maximum extent possible under currently accepted engineering practices. Therefore, cumulative development would result in less than significant impacts related to exposing people or structures to geology and soils. Because both the DTPP Plan-Wide Amendments and cumulative development would result in less than significant impacts related to geology and soils, the project's contribution to cumulative impacts would be less than cumulatively considerable, and therefore, less than cumulatively significant.

The proposed DTPP Plan-Wide Amendments would not result in new or more severe cumulative impacts related to geology and soils than the impacts identified in the DTPP Final EIR. Cumulative impacts from implementation of the DTPP Plan-Wide Amendments would be *less than significant*.

CHAPTER 18

Other CEQA-Required Assessment Considerations

This chapter summarizes the SEIR findings in terms of the various assessment categories suggested by the California Environmental Quality Act (CEQA) Guidelines for EIR content. The findings of this SEIR regarding the proposed project are summarized below in terms of potential “growth-inducing effects,” “significant unavoidable impacts,” and “irreversible environmental changes.”

18.1 Growth-inducing Effects

Section 21100(b)(5) of CEQA requires that an EIR include information regarding the growth-inducing impacts of the proposed project. CEQA Guidelines section 15126.2(d) states that an EIR shall:

“Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing either directly or indirectly, in the surrounding environment.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement results if a project involves construction of new housing that would result in new residents moving to the area, imposing new burdens on a community that directly induces population growth or the construction of additional development in that same area of the proposed project, thereby triggering growth-associated impacts.

Projects that indirectly induce growth are those that may provide a catalyst for future unrelated development in an area. Similarly, under CEQA, a project could indirectly induce growth if it expands roadway capacity or removes an obstacle to additional growth and development, such as removing a constraint on required public services or utilities (e.g., adding a sewage treatment plant that has capacity to serve demand beyond the associated project).

The proposed DTPP Plan-Wide Amendments would not induce additional growth; rather, the proposed amendments represent a plan to accommodate already forecast residential and employment growth. Moreover, the DTPP area is specifically designated as a PDA and urban infill development on underutilized sites is consistent with the Housing Element and other General Plan policies that encourage siting transit-oriented development along major transportation corridors, support mixed use development to facilitate a linkage between housing

and employment opportunities, and promote increased density in appropriately designated areas. Therefore, the proposed DTPP Plan-wide Amendments would not result in a significant inducement of direct growth that would result in significant impacts to the environment. The next sections discuss the project's role on indirectly inducing growth.

18.1.1 Removal of Obstacles to Growth

The elimination of physical obstacles to growth is considered a growth-inducing effect. Common factors that limit growth include limited capacities of local or regional utility infrastructure, such as storm drainage systems or wastewater conveyance and treatment systems. Transportation infrastructure can also be a factor that limits growth.

The project site is within a fully urbanized area, with extensive transportation and utility infrastructure designed to accommodate urban development. As described in Chapter 3, *Project Description*, the proposed DTPP Plan-Wide Amendments would consist of circulation improvements, alterations to parking ratios, and revisions to certain development standards, guidelines and policies. In addition, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP. However, this development would not remove barriers to growth, nor would they increase vehicular capacity.

For the foregoing reasons, the proposed project would not eliminate obstacles to further growth within the meaning of CEQA Guidelines section 15126.2(e).

18.1.2 Economic Effects

As discussed in Chapter 3, *Project Description*, and Chapter 5, *Population and Housing*, this SEIR programmatically evaluates the potential for additional office and residential development in the DTPP area to accommodate the Gatekeeper Projects, an anticipated future northward expansion of the DTPP area, and an additional increment of development potential in the DTPP area. The assumed amount of office square footage is 1,167,100 square feet, while the assumed increase in the number of residential units is 830 units. Under future conditions, the office uses that may be developed as part of the proposed DTPP Plan-Wide Amendments may result in approximately 5,070 new jobs. As discussed in Chapter 5, *Population and Housing*, no significant effects would ensue from this growth and the growth would not be unplanned. Instead, the growth would be consistent with and implement important components of the policy framework underlying *Plan Bay Area 2050*, including the associated growth projections and visions to concentrate new growth around transit. Moreover, growth in the immediate vicinity of transit (i.e., development proximate to the Redwood City Transit Center) would tend to have lesser environmental effects than would the same development in a less transit-accessible location. Accordingly, the proposed DTPP Plan-Wide Amendments would have less than significant impacts with respect to indirect growth inducement.

18.1.3 Conclusion

Based on the discussions above, the proposed DTPP Plan-Wide Amendments would not remove physical obstacles to growth such that it would indirectly induce growth, nor would it result in significant direct growth inducement. Growth inducement is also discussed in Chapter 5, *Population and Housing*, of this SEIR.

18.2 Significant Unavoidable Impacts

CEQA Guidelines section 15126.2(b) requires that an EIR discuss “significant environmental effects which cannot be avoided if the proposed project is implemented.” Significant unavoidable impacts are those that would not be reduced to a less-than-significant level by the mitigation measures identified in this EIR.

As discussed in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, Chapter 12, *Air Quality*, Chapter 13, *Climate Change*, and Chapter 17, *Cumulative Impacts*, the proposed project could result in the following significant unavoidable impacts related to cultural resources, air quality, and climate change.

Impact CR-1: Implementation of the DTPP Plan-Wide Amendments would potentially cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

- Implementing Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) to preliminarily determine whether or not the project may have a potentially significant adverse effect on the historic resource, and Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) review proposed development adjacent to a historic resource to determine whether such development could adversely affect an adjacent historic resource, and Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments) to reduce ground-borne vibration levels, would reduce the severity of the impact, but not necessarily to a less-than-significant level.

Impact CR-1 is not a direct impact of adoption of the proposed DTPP Plan-Wide Amendments, but rather a potential impact of individual development project(s) that may be approved pursuant to the plan. The DTPP Plan-Wide Amendments analysis identifies potential historic structures within the amended DTPP area, and notes that potential impacts to those resources may be significant.¹ However, it cannot be known with certainty whether a subsequent individual development project would adversely affect a historic structure. However, as noted in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, in the conclusion following Impact CR-1:

Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) requires that, for proposed development on parcels that

¹ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

contain historic resources, the City make a preliminary determination as to whether any discretionary projects would have a potentially significant adverse effect on historic resources. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) requires that proposed development adjacent to historic resources requiring discretionary approval be reviewed by an architect or architectural historian and be conditioned to avoid any substantial adverse changes on adjacent historical resources. Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments) imposes conditions of approval on all future projects involving demolition and construction activities in order to reduce ground-borne vibration levels. These three mitigation measures remain applicable to the DTPP Plan-Wide Amendments and have been included here with necessary clarifications to reduce significant impacts to historic resources. However, even with these mitigation measures in place, the DTPP Plan-Wide Amendments have the potential to result in substantial adverse changes to historic resources, including possible demolition, and potential impacts to historic resources therefore remain *significant and unavoidable*.

The only means of ensuring that Impact CR-1 would be less than significant would be to not allow the development of individual projects in the amended DTPP area to replace or be constructed adjacent to an existing or eligible historic structure. However, although this impact is conservatively considered to be significant and unavoidable with mitigation; in reality, the severity of this impact cannot be gauged with accuracy until a specific project is analyzed and project-specific mitigation measures applied, and it is possible that future projects developed in the amended DTPP area would not adversely affect a historic resource. Therefore, it would be speculative and inappropriate at the level of a program SEIR to attempt to limit the precise locations of future individual projects as a means of addressing this potential future project-specific impact.

Impact C-CR-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would potentially result in significant cumulative impacts related to cultural, historic, and tribal cultural resources.

Even with the implementation of one or more of the mitigation measures established in the DTPP Final EIR and included in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, with clarifying amendments, the impact on historical resources by the DTPP Plan-Wide Amendments would remain potentially significant and unavoidable. Therefore, the contribution of the DTPP Plan-Wide Amendments to cumulative impacts to historical resources would remain cumulatively considerable and thus significant and unavoidable.

Impact AQ-2: Implementation of the DTPP Plan-Wide Amendments would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- Implementing Mitigation Measures AQ-2a: Best Management Practices for Construction Dust Suppression, and AQ-2b: Emission Reduction Measures for Projects Exceeding the Significance Thresholds for Criteria Pollutants, would reduce the severity of the impact, but not necessarily to a less-than-significant level.

Impact AQ-2 is not a direct impact of adoption of the proposed DTPP Plan-Wide Amendments, but rather a potential impact of individual development project(s) that may be approved pursuant

to the plan. This is because the BAAQMD thresholds of significance with respect to criteria air pollutants for revisions to a plan (consistency with current air quality plan control measures, and projected VMT or vehicle trip increase is less than or equal to projected population increase) differ from the criteria pollutants thresholds of significance for individual projects, which are based on comparison to specific quantities of daily and annual project emissions. Accordingly, it cannot be known with certainty whether a subsequent individual development project would exceed the project-specific significance thresholds for criteria pollutants until the individual project is analyzed at the project-specific level. However, as explained in Chapter 12, *Air Quality*, in the conclusion following Impact AQ-2:

Mitigation Measure AQ-2b is expected to be effective at reducing criteria pollutant emissions from construction and operation of individual projects developed in the amended DTPP area to below the BAAQMD thresholds; however, the specific emissions associated with future projects are not currently known, and therefore the effectiveness of emission reduction measures cannot be definitively determined. It is possible that projects with substantial ground disturbance, specialty construction equipment, or compressed and highly intensive construction schedules could exceed construction significance thresholds, particularly if the Tier 4 Final equipment required by the mitigation measure is not commercially available. Also, ROG emissions from consumer products used during project operations may remain significant because use of such products is a function of consumer choice and commercial availability. Finally, although the mitigation measure would require emissions offsets required to reduce any criteria pollutant emissions that would exceed the thresholds of significance for these pollutants after implementation of all other feasible emission reduction measures, implementation of the emissions reduction project(s) could be conducted by BAAQMD and is outside the jurisdiction and control of the City and not fully within the control of the project applicants. For these reasons, criteria air pollutants from construction and operation of subsequent projects developed under the proposed DTPP Plan-Wide Amendments would conservatively be significant and unavoidable with mitigation.

The identification of this significant and unavoidable impact does not preclude the finding of a less-than-significant or less-than-significant-with-mitigation impact for subsequent projects that are below the applicable screening criteria or that meet the criteria air pollutant thresholds of significance with implementation of Mitigation Measures AQ-2b.

The only means of ensuring that Impact AQ-2 would be less than significant would be to cap the size of individual development projects within the amended DTPP area. However, while this impact is conservatively considered to be significant and unavoidable with mitigation; in reality, the severity of this impact cannot be gauged with accuracy until a specific project is analyzed and project-specific mitigation measures applied, and it is possible that future project emissions will be below the threshold with mitigation. Therefore, it would be speculative and inappropriate at the level of a program SEIR to attempt to limit the size of individual projects as a means of addressing this potential future project-specific impact.

Impact C-AQ-1: Adoption of the proposed DTPP Plan-Wide Amendments would result in a cumulatively considerable contribution to the regional cumulative air quality impacts.

Impact C-AQ-1 is the cumulative equivalent of DTPP Plan-Wide Amendments-specific Impact AQ-2; because Impact AQ-2 is significant and unavoidable, Impact C-AQ-1 is likewise conservatively considered to be significant and unavoidable.

Impact CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact CC-2: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact CC-1 and CC-2 would be reduced to the extent feasible with implementation of Mitigation Measure CC-1, however, as explained in Chapter 13, *Climate Change*, the City Council in 2020 adopted the Redwood City Reach Codes, which permit certain exceptions to prohibitions on the use of natural gas as local policy, adopted following staff's extensive research, consideration of other examples, and public input. Therefore, this SEIR considers that the full implementation of all-electric building development may not be feasible because projects may qualify for exceptions to the all-electric requirements, and, as a result, Impacts CC-1 and CC-2 are conservatively considered to be significant and unavoidable.

Impact C-CC-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, could result in a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Impact C-CC-1 is the cumulative equivalent of DTPP Plan-Wide Amendments-specific Impacts CC-1 and CC-2; because Impacts CC-1 and CC-2 are concluded to be significant and unavoidable, Impact C-CC-1 is likewise conservatively considered to be significant and unavoidable, for the reason set forth above.

18.3 Irreversible Environmental Changes

CEQA Guidelines section 15126.2(c) requires that the EIR discuss "significant irreversible environmental changes which would be caused by the proposed project should it be implemented." Implementation of the proposed DTPP Plan-Wide Amendments would result in an irreversible commitment of energy resources, primarily in the form of fossil fuels, including fuel oil, natural gas, and gasoline or diesel fuel for construction equipment and automobiles during project construction and ongoing use within the amended DTPP area. Because office and residential development allowed by the proposed DTPP Plan-Wide Amendments would be required by law to comply with California Code of Regulations Title 24 and adopted City energy conservation ordinances and regulations, and would constitute infill development in a Transit Priority Area and

Priority Development Area, the proposed DTPP Plan-Wide Amendments would not be expected to use energy in a wasteful, inefficient, or unnecessary manner (see Chapter 13, *Climate Change*, of this SEIR).

The consumption or destruction of other non-renewable or slowly renewable resources would also result during construction, occupancy, and operation of the proposed DTPP Plan-Wide Amendments. These resources would include, but would not be limited to, lumber, concrete, sand, gravel, asphalt, masonry, metals, and water. Development that could occur in the amended DTPP area would also irreversibly use water and solid waste landfill resources. However, development would not involve a large commitment of those resources relative to supply, nor would it consume any of those resources wastefully, inefficiently, or unnecessarily, especially considering ongoing City and County conservation, diversion, and recycling programs.

Construction and operation of infill developments would also emit pollution into the air, from construction equipment and vehicles, and from vehicles traveling to and from each infill development project during operation. These developments would also consume fossil fuels (petroleum and potentially natural gas), and electricity generated by fossil fuels and other non-renewable resources during operation. As described throughout this EIR, DTPP Plan-wide Amendments would facilitate anticipated transient-oriented development in such a manner that would reduce vehicle trips, encourage pedestrian and bicycle circulation, and promote public transit use. In addition, development projects that would be implemented under the Plan-Wide Amendments would be required to comply with federal, state, and local requirements (described within each environmental resource section), such as Title 24 requirements and low impact development requirements that would reduce the irretrievable loss of, and irreversible commitment of, natural resources.

18.4 Effects Found Not to be Significant

Section 15128 of the CEQA Guidelines requires that the EIR "contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." This SEIR discusses all of the environmental topic areas included in CEQA Guidelines Appendix G (Environmental Checklist Form), with the potential significance of each impact evaluated in the appropriate EIR chapter (e.g., Chapter 6 – *Aesthetics*, Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*), with the exception of the following environmental topics:

- ***Agricultural and Forestry Resources (item II in CEQA Appendix G)***: As discussed in the DTPP Final EIR,² no agricultural uses are located within the amended DTPP area. According to the San Mateo County Important Farmlands Map, the amended DTPP area does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No portion of the amended DTPP area is zoned for agricultural use, nor is any portion of the site under a Williamson Act contract. Therefore, the proposed project would not result in any impact on farmland.

² 2010 DTPP EIR, p. 18-4.

- **Mineral Resources (item XII in CEQA Appendix G):** As discussed in the DTPP Final EIR,³ no significant mineral deposits are identified in the amended DTPP area. Therefore, the proposed project would not result in any impact on mineral resources.
- **Wildfire (item XX in CEQA Appendix G):** This topic was not included in Appendix G at the time the DTPP Final EIR was certified, and therefore this topic was not addressed in the DTPP Final EIR. However, inasmuch as development in the amended DTPP area would consist of urban infill and there are no high fire hazard areas or wildlands susceptible to wildfire in the project vicinity, effects related to wildfire would be less-than-significant.

³ 2010 DTPP EIR, p. 18-4.

CHAPTER 19

Alternatives to the Proposed Project

19.1 Introduction

CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, and evaluate the comparative merits of the alternatives (*CEQA Guidelines* Section 15126.6(a), (d)). The “range of alternatives” is governed by the “rule of reason,” which requires the EIR to set forth only those alternatives necessary to foster informed decision-making and public participation (Section 15126.6(a), (f)).

The range of alternatives shall include alternatives that would feasibly attain most of the basic objectives of the project and would avoid or substantially lessen any of the significant effects of the project (*CEQA Guidelines* Section 15126.6(a)-(c)). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. An EIR must briefly describe the rationale for selecting the alternatives to be discussed and identify any alternatives that were rejected as infeasible, briefly explaining the reasons (15126.6(c)).

The description or evaluation of alternatives selected for analysis need not be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative. An EIR need not describe or evaluate the environmental effects of alternatives in the same level of detail as the proposed project, but must include enough information to allow meaningful evaluation, analysis, and comparison with the proposed project (*CEQA Guidelines* Section 15126.6(d)).

The “no project” alternative must be evaluated. This analysis shall discuss the existing conditions, as well as what could be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (*CEQA Guidelines* Section 15126.6(e)(2)). Where, as in this case, the proposed project is the revision of an existing land use plan, the “no project” alternative “will be the continuation of the existing plan, policy or operation into the future. Typically, this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan” (*CEQA Guidelines* Section 15126.6(e)(3)(A)). This differs from the case in which the proposed project is an individual development, in which instance the “no project” alternative entails either no development on the project site or, if predictable, a different proposed project or action.

CEQA also requires that an environmentally superior alternative be selected from among the alternatives. The environmentally superior alternative is the alternative with the fewest or least severe adverse environmental impacts. When the “no project” alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives (*CEQA Guidelines* Section 15126.6(e)(2)).

19.2 DTPP EIR Alternatives

The DTPP Draft EIR described seven alternatives to proposed project, including a No Project Alternative that assumed build-out of the DTPP under the 1990 Redwood City Strategic General Plan and Zoning Code, and would have resulted in more development than the proposed DPP. Other alternatives included Alternative 2: DPP With Reduced Development Capacity, Alternative 3: DPP with Reduced Building Height, Alternative 4: Revised Maximum Allowable Development (MAD) Caps; and Alternative 5: Revised Historic Resource Preservation Regulations. Alternative 6 (Revised DPP Area) and Alternative 7 (Alternative DPP Location) were eliminated without detailed analysis because they would not avoid or substantially lessen potential significant environmental effects, and/or would not achieve basic project objectives.

**TABLE 19-1
DTPP DRAFT EIR ALTERNATIVES COMPARED TO THE DPP: SUMMARY OF NET NEW DEVELOPMENT^a**

	Residential (Units)	Office (s.f.)	Retail (s.f.)	Lodging (rooms)	Industrial (s.f.)
Proposed DPP	2,500	275,000	221,000	200	-95,000
Alternative 1: No Project	3,300	921,000	275,000	189	-95,000
Alternative 2: Reduced Development	1,875	206,250	165,750	200	-95,000
Alternative 3: Reduced Height	2,500	275,000	221,000	200	-95,000
Alternative 4: Revised MAD Caps	2,500	500,000	100,000	200	-95,000
Alternative 5: Revised Preservation Regulations	2,500	275,000	221,000	200	-95,000

NOTES:

^a Neither the Proposed DPP nor the alternatives proposed new civic/institutional uses.

SOURCE: City of Redwood City, DTPP Draft EIR p. 19-14

Following certification of the DTPP Final EIR, the City Council approved the proposed DTPP with amendments analyzed in Alternative 4 (revised development caps) and Alternative 5 (revised preservation regulations).

19.3 Project Objectives

CEQA Guidelines Section 15124(b) requires the description of the project in an EIR to state the objectives sought by the project, explaining that “A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.”

In keeping with this requirement, the City’s project objectives are as follows:

- To continue to allow for sustainable, transit-oriented development that is responsive to market demands and can be constructed. This additional development would be advanced through subsequent project-specific DTPP and General Plan amendments to increase the DTPP’s maximum allowable development cap for office use, and through subsequent project-specific approval(s) of increases in the number of residential units. This development would occur in an urban setting near employment, goods and services, and multimodal transportation facilities, thereby reducing vehicle miles traveled, greenhouse gas emissions, and air quality impacts, consistent with the City’s Housing, Transportation (Transit-Oriented Development), and Climate Goals;
- To meet the City’s housing needs for people at all income levels, incentivizing and encouraging the production of housing to meet Regional Housing Needs Assessment (RHNA) requirements and the City’s aspirational goal of planning for 150 percent of the RHNA allocation;
- To increase the supply of affordable housing units in the City, with an emphasis on encouraging production of on-site and off-site affordable housing, providing additional opportunities for affordable housing for residents to live in or close to Downtown where there is better access to employment, goods and services, and multimodal transportation facilities;
- Increase the office development cap modestly (by 80,000 square feet) specifically reserved for small office projects, defined as 20,000 net new square feet or less of office space.
- To create and maintain a multimodal, safe, and accessible transportation network and to encourage development within close proximity to transportation networks;
- To create opportunities for children and youth to grow, learn, and play in safe and healthy environments, including increasing opportunities for youth activities;
- To encourage economic growth in the community through the creation of construction jobs and full-time, on-site jobs;
- To make circulation improvements to promote quality vehicular, bicycle and pedestrian connections;
- To lower the parking requirement for motor vehicles to reflect actual demand, current best practices and future plans for Caltrain track expansion that will encourage non-driving modes of transportation while continuing to incentivize shared parking and the ability for project applicants to pay a fee to the City in lieu of providing new parking spaces, and to increase required bicycle parking;
- To require frontage improvements to support active transportation consistent with RWCmoves (Redwood City’s Citywide Transportation Plan); with the City’s El Camino Real Corridor Plan; and with the RWC Walk Bike Thrive initiative approved by the City Council in June 2022;

- To require frontage improvements to support active transportation consistent with RWCmoves (Redwood City’s Citywide Transportation Plan); with the City’s El Camino Real Corridor Plan; and with the RWC Walk Bike Thrive initiative approved by the City Council in June 2022;
- To accommodate certain rooftop active, recreational uses providing project amenities or benefits (e.g., rooftop bars/restaurants, open spaces, gardens, sports courts, swimming pools, landscaping, and publicly accessible amenities) by allowing rooftop structures that support rooftop uses;
- To accommodate the potential for Research and Development (R&D) laboratories in the DTPP area, as a conditionally permitted use. While R&D, Office Type, is currently a permitted use, the DTPP Plan-Wide Amendments contemplate the addition, as a conditionally permitted use, of R&D, Laboratory Type, as defined in the Zoning Ordinance. Potential performance standards may be considered to address use, manufacturing and storage of hazardous materials, deliveries associated with R&D Laboratory uses, and the impacts of these uses near sensitive receptors (including schools, community centers, residential uses, etc.); and
- To allow some development flexibility by permitting limited exceptions, for sites that are constrained by either the anticipated Caltrain track improvements and realignment or by creek or stormwater features, or that provide publicly accessible open space as identified by the City, to building placement requirements (i.e., build-to-corner, building setback, and frontage coverage requirements) to allow corner setbacks, other setbacks from the street, and lesser lot coverage than is currently required; permitting limited exceptions to the stepdown requirements; and lowering the required minimum heights from 35 feet to two stories, with a range of 25 to 35 feet, or less with a potential exception.

19.4 Significant Impacts of the Proposed Project

19.4.1 Significant Unavoidable Impacts

As stated above, a focus of the discussion of alternatives is to determine whether there are potentially feasible alternatives that could avoid or substantially lessen the significant impacts of the proposed project. As discussed in Chapter 18, Section 18.2, *Significant Unavoidable Impacts*, the proposed project could result in the significant unavoidable impacts related to cultural resources, air quality, and climate change listed below.

Impact CR-1: Implementation of the DTPP Plan-Wide Amendments would potentially cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

- Implementing Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) to preliminarily determine whether or not the project may have a potentially significant adverse effect on the historic resource, and Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) review proposed development adjacent to a historic resource to determine whether such development could adversely affect an adjacent historic resource, and Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with

clarifying amendments) to reduce ground-borne vibration levels, would reduce the severity of the impact, but not necessarily to a less-than-significant level.

Impact CR-1 is not a direct impact of adoption of the proposed DTPP Plan-Wide Amendments, but rather a potential impact of individual development project(s) that may be approved pursuant to the plan. The DTPP Plan-Wide Amendments analysis identifies potential historic structures within the DTPP area, and notes that potential impacts to those resources may be significant. However, it cannot be known with certainty whether a subsequent individual development project would adversely affect a historic structure. However, as noted in Chapter 7, *Cultural and Historic Resources and Tribal Cultural Resources*, in the conclusion following Impact CR-1:

Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) requires that, for proposed development on parcels that contain historic resources, the City make a preliminary determination as to whether any discretionary projects would have a potentially significant adverse effect on historic resources. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) requires that proposed development adjacent to historic resources requiring discretionary approval be reviewed by an architect or architectural historian and be conditioned to avoid any substantial adverse changes on adjacent historical resources. Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments) imposes conditions of approval on all future projects involving demolition and construction activities in order to reduce ground-borne vibration levels. These three mitigation measures remain applicable to the DTPP Plan-Wide Amendments and have been included here with necessary clarifications to reduce significant impacts to historic resources. However, even with these mitigation measures in place, the DTPP Plan-Wide Amendments have the potential to result in substantial adverse changes to historic resources, including possible demolition, and potential impacts to historic resources therefore remain *significant and unavoidable*.

The only means of ensuring that Impact CR-1 would be less than significant would be to not allow the development of individual projects in the DTPP area to replace or be constructed adjacent to an existing or eligible historic structure. However, although this impact is conservatively considered to be significant and unavoidable with mitigation; in reality, the severity of this impact cannot be gauged with accuracy until a specific project is analyzed and project-specific mitigation measures applied, and it is possible that future projects developed in the DTPP area would not adversely affect a historic resource. Therefore, it would be speculative and inappropriate at the level of a program SEIR to attempt to limit the precise locations of future individual projects as a means of addressing this potential future project-specific impact.

Impact C-CR-1: The proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would potentially result in significant cumulative impacts related to cultural, historic, and tribal cultural resources.

Even with the implementation of one or more of the mitigation measures established in the DTPP Final EIR and included in Chapter 7 with clarifying amendments, the impact on historical resources by the DTPP Plan-Wide Amendments would remain potentially significant and unavoidable.

Therefore, the contribution of the DTPP Plan-Wide Amendments to cumulative impacts to historical resources would remain cumulatively considerable and thus significant and unavoidable.

Impact AQ-2: Implementation of the DTPP Plan-Wide Amendments would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- Implementing Mitigation Measures AQ-2a: Best Management Practices for Construction Dust Suppression, and AQ-2b: Emission Reduction Measures for Projects Exceeding the Significance Thresholds for Criteria Pollutants, would reduce the severity of the impact, but not necessarily to a less-than-significant level.

Impact AQ-2 is not a direct impact of adoption of the proposed DTPP Plan-Wide Amendments, but rather a potential impact of individual development project(s) that may be approved pursuant to the plan. This is because the BAAQMD thresholds of significance with respect to criteria air pollutants for revisions to a plan (consistency with current air quality plan control measures, and projected VMT or vehicle trip increase is less than or equal to projected population increase) differ from the criteria pollutants thresholds of significance for individual projects, which are based on comparison to specific quantities of daily and annual project emissions. Accordingly, it cannot be known with certainty whether a subsequent individual development project would exceed the project-specific significance thresholds for criteria pollutants until the individual project is analyzed at the project-specific level. However, as explained in Chapter 12, *Air Quality*, in the conclusion following Impact AQ-2:

Mitigation Measure AQ-2b is expected to be effective at reducing criteria pollutant emissions from construction and operation of individual projects developed in the amended DTPP area to below the BAAQMD thresholds; however, the specific emissions associated with future projects are not currently known, and therefore the effectiveness of emission reduction measures cannot be definitively determined. It is possible that projects with substantial ground disturbance, specialty construction equipment, or compressed and highly intensive construction schedules could exceed construction significance thresholds, particularly if the Tier 4 Final equipment required by the mitigation measure is not commercially available. Also, ROG emissions from consumer products used during project operations may remain significant because use of such products is a function of consumer choice and commercial availability. Finally, although the mitigation measure would require emissions offsets required to reduce any criteria pollutant emissions that would exceed the thresholds of significance for these pollutants after implementation of all other feasible emission reduction measures, implementation of the emissions reduction project(s) could be conducted by BAAQMD and is outside the jurisdiction and control of the City and not fully within the control of the project applicants. For these reasons, criteria air pollutants from construction and operation of subsequent projects developed under the proposed DTPP Plan-Wide Amendments would conservatively be significant and unavoidable with mitigation.

The identification of this significant and unavoidable impact does not preclude the finding of a less-than-significant or less-than-significant-with-mitigation impact for subsequent projects that are below the applicable screening criteria or that meet the criteria air pollutant thresholds of significance with implementation of Mitigation Measures AQ-2b.

The only means of ensuring that Impact AQ-2 would be less than significant would be to cap the size of individual development projects within the DTPP area. However, while this impact is conservatively considered to be significant and unavoidable with mitigation; in reality, the severity of this impact cannot be gauged with accuracy until a specific project is analyzed and project-specific mitigation measures applied, and it is possible that future project emissions will be below the threshold with mitigation. Therefore, it would be speculative and inappropriate at the level of a program SEIR to attempt to limit the size of individual projects as a means of addressing this potential future project-specific impact.

Impact C-AQ-1: Adoption of the proposed DTPP Plan-Wide Amendments would result in a cumulatively considerable contribution to the regional cumulative air quality impacts.

Impact C-AQ-1 is the cumulative equivalent of DTPP Plan-Wide Impact AQ-2; because Impact AQ-2 is significant and unavoidable, Impact C-AQ-1 is likewise conservatively considered to be significant and unavoidable.

Impact CC-1: Implementation of the proposed DTPP Plan-Wide Amendments would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact CC-2: Implementation of the proposed DTPP Plan-Wide Amendments would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact CC-1 and CC-2 would be reduced to the extent feasible with implementation of Mitigation Measure CC-1, however, as explained in Chapter 13, Climate Change, the City Council in 2020 adopted the Redwood City Reach Codes, which permit certain exceptions to prohibitions on the use of natural gas as local policy, adopted following staff's extensive research, consideration of other examples, and public input. Therefore, this SEIR considers that the full implementation of all-electric building development may not be feasible because projects may qualify for exceptions to the all-electric requirements, and, as a result, Impact CC-1 and CC-2 are conservatively considered to be significant and unavoidable.

Impact C-CC-1: Implementation of the DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, could result in a cumulatively considerable contribution to GHG emissions that may have a significant impact on the environment or conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Impact C-CC-1 is the cumulative equivalent of DTPP Plan-Wide Impacts CC-1 and CC-2; because Impacts CC-1 and CC-2 are concluded to be significant and unavoidable, Impact C-CC-1 is likewise conservatively considered to be significant and unavoidable, for the reason set forth above.

19.4.2 Significant but Mitigable Impacts

As stated above, a focus of the discussion of alternatives is to determine whether there are potentially feasible alternatives that could avoid or substantially lessen the significant impacts of the proposed project. This can include significant impacts for which mitigation measures have been identified to reduce the severity of project impacts to less than significant. The proposed project would result in the following potentially significant impacts that could be reduced to a less-than-significant level with mitigation:

Impact AE-5: Implementation of the DTPP Plan-Wide Amendments would not cast shadow that would substantially impair the beneficial use, important values, or livability of any shadow-sensitive use, including public parks, plazas or open space areas; buildings using passive solar heat collection or solar collectors; historic resources with a shadow-sensitive character-defining feature; or shadow-sensitive portions of residential parcels.

Impact CR-2: Implementation of the DTPP Plan-Wide Amendments would potentially cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact CR-4: Implementation of the DTPP Plan-Wide Amendments may cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe.

Impact UT-2: Implementation of the DTPP Plan-wide amendments would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact NO-1: Implementation of the DTPP Plan-Wide Amendments could generate a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact NO-2: Implementation of the DTPP Plan-Wide Amendments could generate a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact NO-3: Implementation of the DTPP Plan-Wide Amendments could generate excessive groundborne vibration or groundborne noise levels.

Impact AQ-3: Implementation of the proposed DTPP Plan-Wide Amendments would expose sensitive receptors to substantial pollutant concentrations.

Impact BIO-1: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact BIO-2: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on any riparian habitat or other sensitive natural community

identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Implementation of the proposed DTPP Plan-Wide Amendments would expose sensitive receptors to substantial pollutant concentrations.

Impact BIO-3: Implementation of the DTPP Plan-Wide Amendments would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact BIO-4: Implementation of the DTPP Plan-Wide Amendments would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Impact BIO-5: Implementation of the DTPP Plan-wide Amendments would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact GEO-2: Implementation of the DTPP Plan-Wide Amendments would not result in substantial soil erosion or the loss of topsoil.

Impact GEO-4: Implementation of the DTPP Plan-Wide Amendments would be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2019)¹, creating substantial direct or indirect risks to life or property.

Impact GEO-6: Implementation of the DTPP Plan-Wide Amendments would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact C-AQ-2: Adoption of the proposed DTPP Plan-Wide Amendments, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects, would not result in a cumulatively considerable contribution to local health risk impacts.

19.5 SEIR Alternatives Considered but Dismissed from Further Evaluation

Like the DTPP EIR, and in keeping with CEQA Guidelines Section 15126.6(f)(2), this SEIR considered whether to analyze alternate locations for the DTPP area, and concluded that such an alternative would not meet the primary objective of the project, which is to continue to allow for development that is responsive to market demands and can be constructed within the DTPP area, and that is sustainable, based on its adjacency to a major transit stop. Because the location of the DTPP area is fundamental to its purpose, and another location with comparable access to transit, underutilized sites, and residential development opportunities proximate to downtown does not exist, an off-site alternative was not carried forward for evaluation in this EIR.

¹ The California Building Code (CBC), which is based on the International Building Code (IBC) replaced the now defunct Uniform Building Code (UBC) in 2000; it no longer includes a Table 18-1-B. Instead, Section 1803.5.3 of the CBC describes the criteria for analyzing expansive soils. This is discussed further in the *Regulatory Setting*.

Additionally, none of the reduced density alternatives evaluated in the DTPP EIR are feasible, given that the amount of office space and the number of residential units already developed exceeds the totals for each of those alternatives.

19.6 Selection and Analysis of SEIR Alternatives

19.6.1 Identified Alternatives

As described in this section, this SEIR analyzes a no project alternative and two other alternatives to the proposed DTPP Plan-Wide Amendments, and compares the impacts of those alternatives to each other and to the project.

In selecting alternatives for analysis in this chapter, the City of Redwood City considered: the project objectives and significant impacts identified above; the potential feasibility of alternatives based on factors in CEQA Guidelines Section 15126.6(f)(1); and whether the alternatives would substantially reduce or eliminate environmental impacts of the project, with a particular emphasis on significant and unavoidable impacts.

Consistent with these requirements, and CEQA's requirement for a No Project Alternative, this chapter describes the following alternatives:

- Alternative 1: No Project/Existing DTPP Plan Alternative
- Alternative 2: Reduced Development Alternative
- Alternative 3: Altered Land Use Mix Alternative

Table 19-2 compares the development program of the project and the alternatives, each of which is described further below.

TABLE 19-2
PROPOSED LAND USE INCREASES
FOR THE PROPOSED DTPP PLAN-WIDE AMENDMENTS AND ALTERNATIVES

Land Use	Assumed Increase in Office Space	Chg. fr. Project	Assumed Increase in Residential Units	Chg. fr. Project
Proposed DTPP Plan-Wide Amendments ^a	1,167,100 square feet		830 units	
Alternative 1: No Project/Existing DTPP Alternative	0 square feet	-100%	0 units	-100%
Alternative 2: Reduced Development Alternative ^a	775,000 square feet	-34%	550 units	-34%
Alternative 3: Altered Land Use Mix Alternative ^a	600,000 square feet	-49%	1,100 units	+33%

NOTES:

^a Up to 30 percent of the office cap may be devoted to Research and Development Laboratory use.

SOURCE: City of Redwood City, 2022

The following discussion provides a comparative evaluation of the environmental consequences of the alternatives selected for further consideration in this EIR. Consistent with the requirements of CEQA Guidelines Section 15126.6(d), the discussion includes “sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with” the proposed project. As provided for under CEQA, if an alternative would cause a significant impact that would not otherwise be caused by the proposed project, the significant impact of the alternative would be discussed, but in less detail than the significant impacts of the proposed project that are presented elsewhere in this SEIR.

19.6.2 Identified Alternatives

Alternative 1: No Project/Existing DTPP Alternative

The No Project/Existing DTPP Alternative would not assume increased development in the DTPP area beyond that permitted under the existing development caps. Accordingly, it is assumed that, under this alternative, little or no office or residential growth would occur. Currently, less than 5,000 square feet of office space remains in the office development cap, while fewer than 500 dwelling units remained in the residential development cap.² There would be no changes in land use controls (development standards) related to building design, building massing, or building height in the DTPP area to support transit-oriented development. Further, Alternative 1 would not extend the northern DTPP boundary approximately 0.1 mile northward between El Camino Real and the Caltrain tracks to include five additional parcels.

Alternative 1 would likely not allow for development of the six Gatekeeper Projects described in Chapter 2, *Project Description*, because any project proposing growth in excess of the existing office development cap would require a project-specific General Plan and DTPP amendment. By its nature, the No Project Alternative assumes that such amendments would not be granted.

Alternative 2: Reduced Development Alternative

Under the Reduced Development Alternative, an overall lesser amount of allowed office and residential development would be assumed, compared to the proposed DTPP Plan-Wide Amendments. Like the proposed project, this alternative would consist of amendments to the DTPP that would revise certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation; building placement; minimum building height and massing; parking; historical resources; and open space. Alternative 2 is also assumed to indirectly result in increased development of office and residential uses and to include a potential future northerly expansion of the DTPP boundary. However, under the Reduced Development Alternative, the increase in office development in the DTPP area would be 775,000 square feet, which is about two-thirds of the office development cap proposed under the DTPP Plan-Wide Amendments. As with the project, an assumed 30 percent of the office development could be allocated to Research and

² It is anticipated that approximately 130 units from the remaining residential cap may be allocated to a project currently under City review at 1330 El Camino Real. Also, as explained in Chapter 3, *Project Description*, the existing cap on residential development in the DTPP area is proposed to be eliminated.

Development Laboratory uses. Under this alternative, the assumed residential development would similarly be about two-thirds of the project proposal, or 550 dwelling units. Other aspects of the proposed DTPP Plan-Wide Amendments would also be part of this alternative and would be the same as those with the proposed DTPP Plan-Wide Amendments, or nearly so.

Alternative 3: Altered Land Use Mix Alternative

This alternative, which is included specifically to address concerns raised during the scoping process about the amount of office development anticipated in Redwood City and about the City's jobs/housing balance, would reduce the amount of office space compared to what is assumed under the proposed DTPP Plan-Wide Amendments. Like the proposed project, this alternative would consist of amendments to the DTPP that would revise certain development standards, guidelines and policies, including, but not necessarily limited to, those with respect to permitted or conditionally permitted land uses; streets and circulation; building placement; minimum building height and massing; parking; historical resources; and open space.

Alternative 3 is also assumed to indirectly result in increased development of office and residential uses and include a potential future northerly expansion of the DTPP boundary. However, the amount of additional office square footage is assumed be limited to 600,000 square feet, or about half that of the proposed project. As with the project, an assumed 30 percent of the office development could be allocated to Research and Development Laboratory uses. The reduction in the proposed office would reduce the overall intensity of job creating uses in the DTPP area when compared to the DTPP Plan-Wide Amendments. Under this alternative, the number of residential units to be developed in the DTPP area would be one-third more than under the proposed DTPP Plan-Wide Amendments, or 1,100 units.

Other aspects of the proposed DTPP Plan-Wide Amendments including changes to land use controls (development standards) related to, among other things, building design, building massing, and minimum building height, would also be part of this alternative and would be the same as those with the proposed DTPP Plan-Wide Amendments.

19.6.3 Alternatives Evaluation

Alternative 1: No Project/Existing DTPP Alternative

Under Alternative 1, the No Project/Existing DTPP Alternative, there would be no amendments to the DTPP adopted, and therefore none of the effects of the proposed DTPP Plan-Wide Amendments would occur and the existing DTPP would continue to govern within the existing DTPP boundaries.

If no development were to occur, existing conditions as described in Chapter 3, *Project Description*, and in the technical analyses in Chapters 4 through 16 would remain. In this instance, there would be no impacts related to the intensity of development, such as increases in traffic, or emissions of criteria air pollutants or toxic air contaminants from construction or operation of new buildings in the DTPP area. Likewise, there would be no increase in noise, vibration, or greenhouse gas emissions from construction or operation of development projects allowed by the DTPP Plan-Wide Amendments, and no increase in population or employment or increase in demand for public services or utilities. There would also be no effects related to the footprint of subsequent

development projects, meaning that there would be no excavation that could disturb archaeological or tribal cultural resources, result in exposure of workers or the public to subsurface soil or groundwater contamination, or disturb paleontological resources; no building demolition that could adversely affect historical resources; no disturbance of nesting birds or removal of trees that could result from construction of subsequent development projects in the DTPP area; and no development in the DTPP area on potentially expansive or corrosive soils.

The No Project/Existing DTPP Alternative would avoid the proposed DTPP Plan-Wide Amendments' potentially significant and unavoidable effects related to air quality, cultural resources, and climate change. This alternative would also avoid each of the project's significant but mitigable impacts identified above.

Inasmuch as the adopted DTPP would continue to apply, development could proceed in the DTPP area, although as noted earlier, little office or residential capacity current remains in the DTPP.

The No Project/Existing DTPP Alternative would not meet any of the City's objectives for the DTPP Plan-Wide Amendments, in that it would not:

- Continue to allow for new sustainable, transit-oriented office and residential development;
- Support meeting the City's housing needs;
- Increase the supply of affordable/workforce housing;
- Reserve a portion of the office development cap for small office projects;
- Create and maintain a multimodal, safe, and accessible transportation network;
- Create safe and healthy opportunities for children and youth to grow, learn, and play;
- Encourage economic growth in the community through the creation of construction and full-time jobs;
- Make circulation improvements;
- Lower the motor vehicle parking requirement to reflect actual demand and best practices;
- Require building frontage improvements to support active transportation;
- Accommodate certain rooftop recreational uses providing project amenities or benefits; or
- Allow some development flexibility by permitting limited exceptions to building placement requirements.

Additionally, the No Project Alternative would be inconsistent with the direction in Plan Bay Area, the Bay Area's regional Sustainable Communities Strategy, to focus growth in existing communities along the existing transportation network. By not encouraging this imminent future growth in population and employment in areas that are well-served by transit and within close proximity to activity hubs, the number and length of vehicle trips would likely increase, thereby increasing GHG emissions and VMT. The No Project Alternative would also hinder Redwood City's ability to meet its obligation to provide new housing under the Regional Housing Needs Allocation process, and could potentially result in a comparable amount of growth occurring in less sustainable, transit-friendly locations of Redwood City or other communities.

Alternative 2: Reduced Development Alternative

Under Alternative 2, the Reduced Development Alternative, impacts related to the intensity of development would generally be reduced due to the one-third reduction in assumed office space and residential units, compared to the DTPP Plan-Wide Amendments. Specifically, potential impacts to criteria air pollutant, toxic air contaminant, and greenhouse gas emissions; noise and vibration; population and employment; and demand for public services and utilities, would generally be reduced, compared to those of the proposed DTPP Plan-Wide Amendments. Nonetheless, potentially significant and unavoidable impacts resulting from the DTPP Plan-Wide Amendments, would remain (generally, with reductions, compared to the severity of project impacts) under this alternative, as described further below.

Cultural and Historic Resources and Tribal Cultural Resources

The Reduced Development Alternative could still develop projects in place of, or adjacent to, eligible historic structures. As a result, adverse impacts to historic structures could occur. Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) would still be required to preliminarily determine whether or not the project may have a potentially significant adverse effect on the historic resource. This assessment and reporting would be done on a project-by-project basis within the DTPP. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) would still be required to review proposed development adjacent to a historic resource to determine whether such development could adversely affect an adjacent historic resource. Further, Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments) would be required to reduce ground-borne vibration levels, which primarily occurs during construction. While these mitigation measures would reduce the severity of impacts to historic structures, they would not necessarily reduce the impacts to a less-than-significant level. Thus, while effects to historic resources could be less under this alternative due to its reduced office development, the impact would remain significant and unavoidable just as with the proposed DTPP Plan-Wide Amendments.

Transportation and Circulation

As explained in Chapter 9, *Transportation and Circulation*, all impacts of the proposed DTPP Plan-Wide Amendments would be less than significant and no mitigation measures would be required. The proposed DTPP Plan-Wide Amendments would be consistent with the General Plan transportation goals; would not conflict with any of the overarching transportation goals of the existing DTPP or RWCMoves; and would increase transit ridership, which would not result in a significant adverse effect on the environment. Because it would result in an increase, compared to existing conditions, of office and residential uses in proximity to a transit station and other comparable uses, the Reduced Development Alternative would likewise be consistent with the General Plan, DTPP, and RWCMoves, and would increase transit ridership, although by a lesser amount than would the proposed DTPP Plan-Wide Amendments. Related effects of the Reduced Development Alternative would be less than significant, as with the proposed DTPP Plan-Wide Amendments.

The Reduced Development Alternative would result in approximately 5 percent fewer daily vehicle trips and an approximately 7 percent decrease in daily vehicle miles traveled (VMT) under cumulative conditions, compared to the proposed DTPP Plan-Wide Amendments. However, as shown in **Table 19-3**, the Reduced Development Alternative would generate more VMT per employee than would the proposed DTPP Plan-Wide Amendments, and would exceed the City’s significance threshold of 15.0 VMT per employee, which would be a new significant effect of the Reduced Development Alternative. This is due to the fact that, from a regional perspective, the demand for the residential units and office square footage removed as part of this alternative would still occur, and those uses could be constructed in other parts of the Bay Area with less transit accessibility and longer distances to activity hubs as compared to the amended DTPP area. Accordingly, additional mitigation would be required, compared to that required under the proposed DTPP Plan-Wide Amendments, in the form of enhanced TDM programs for employment-generating uses (i.e., general office, R&D Laboratory), compared to that required under the proposed DTPP Plan-Wide Amendments, to comply with the City’s TDM Ordinance. This would reduce the potential employee VMT impact to a less-than-significant level. Residential VMT would be incrementally greater than with the proposed DTPP Amendments, but would remain below the City’s VMT threshold.

TABLE 19-3
VMT ANALYSIS RESULTS FOR REDUCED DEVELOPMENT ALTERNATIVE

Scenario	VMT	VMT Threshold	Exceeds Threshold?
Residential Project Components			
Existing	8.5	10.5 VMT per capita	n/a
Proposed Project	8.2		No
Reduced Development Alternative	8.3		No
Office (General Employment) Project Components			
Existing	17.3	15.0 VMT per employee	n/a
Proposed Project	14.9		No
Reduced Development Alternative	16.2		Yes

NOTES:

n/a = Existing VMT is not evaluated against threshold.

Bold-face text indicates significant impact.

SOURCE: Fehr & Peers, 2022.

The proposed DTPP Plan-Wide Amendments would have less-than-significant impacts with respect to safety hazards and emergency access. Because it would develop similar land uses and the intensity of office uses would be lower, the Reduced Development Alternative would similarly result in less than significant impacts.

Air Quality and Climate Change

Like the proposed Transit District DTPP Amendments, the Reduced Development Alternative would result in a lesser percentage increase in VMT than in service population, and therefore this alternative would not conflict with or obstruct implementation of the applicable air quality plan,

and the Plan-level impact would be less than significant, as with the proposed Transit District DTPP Amendments. However, as discussed in Chapter 12, *Air Quality*, and Chapter 17, *Cumulative Impacts*, and above, the analysis in this SEIR conservatively concludes that the proposed DTPP Plan-Wide Amendments could result in a significant unavoidable impact with respect to emissions of criteria air pollutants from individual subsequent development project(s) (Impacts AQ-2 and C-AQ-1). This is because the BAAQMD thresholds of significance with respect to criteria air pollutants for revisions to a plan (consistency with current air quality plan control measures, and projected VMT or vehicle trip increase is less than or equal to projected population increase) differ from the criteria pollutant thresholds of significance for individual projects, which are based on comparison to specific quantities of daily and annual project emissions. Implementation of Mitigation Measures AQ-2a and AQ-2b would reduce the impact, but it cannot be stated with certainty that impacts from all subsequent development projects would be less than significant, even with mitigation.

Because the Reduced Development Alternative would develop less office space and fewer residential units as compared to the proposed DTPP Plan-Wide Amendments, it could be less likely that one or more individual projects could exceed the BAAQMD screening thresholds; however, as with the proposed DTPP Plan-Wide Amendments, it cannot be stated with certainty that, under the Reduced Development Alternative, impacts from all subsequent development projects would be less than significant, even with mitigation. Therefore, this SEIR conservatively concludes that the Reduced Office Alternative, like the DTPP Plan-Wide Amendments, would have a significant unavoidable impact with respect to emissions of criteria air pollutants from individual subsequent development project(s). The foregoing conclusion would also apply to the cumulative impact with respect to emissions of criteria air pollutants from individual subsequent development project(s) (Impact C-AQ-1): this impact would be significant and unavoidable for the Reduced Development Alternative, as it would be for the proposed DTPP Plan-Wide Amendments.

Like the proposed project, this alternative would create potentially significant construction-related health risks resulting from TAC emissions by diesel construction equipment. Implementation of Mitigation Measure AQ-3a would reduce this impact to a less-than-significant level, as with the proposed DTPP Plan Amendments. In terms of potential operational health risks, this alternative, like the proposed DTPP Plan Amendments, would result in an increase in diesel truck traffic and the addition of diesel-powered backup generators and fire pumps (required for buildings over about 85 feet in height), and could accommodate R&D Laboratory use in some of the space assumed as office use. This impact would be potentially significant. Accordingly, Mitigation Measures AQ-3b and AQ-3c would be applicable to this alternative, and would reduce potential health risk impacts to a less-than-significant level.

Other air quality impacts of the proposed DTPP Plan-Wide Amendments would be less than significant, in some cases with mitigation. The proposed DTPP Plan-Wide Amendments would have a less-than-significant impact with respect to compliance with BAAQMD's *2017 Clean Air Plan*, with which the proposed DTPP Plan-Wide Amendments would be consistent. Because it would develop the office and residential uses in proximity to a transit station and other comparable uses in at least some of the same locations, albeit at a reduced overall intensity

(considerably less office space), the Reduced Development Alternative would likewise be consistent with the applicable clean air plan and would have a less-than-significant impact.

Given its lesser increase in total VMT than in service population, at a plan level, the proposed DTPP Plan-Wide Amendments would have a less-than-significant impact with respect to its cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The Reduced Development Alternative would similarly develop office and residential uses in proximity to a transit station and other comparable uses in at least some of the same locations, albeit at a reduced intensity. However, as shown in Table 19-3, this alternative would result in greater VMT per employee and per resident than would the proposed DTPP Plan-Wide Amendments. Nevertheless, like the proposed project, this alternative would have a less-than-significant impact because total cumulative VMT would increase from existing conditions at a lesser rate (31 percent) than would service population (48 percent).

Subsequent development proposed under the DTPP Plan-Wide Amendments would not include any major sources of odor, and therefore odor impacts would be less than significant. With the same land uses at a reduced overall intensity, the Reduced Development Alternative would likewise have less-than-significant odor impacts.

As discussed in Chapter 13, *Climate Change*, even with implementation of Mitigation Measure CC-1, the proposed DTPP Plan-Wide Amendments could result in significant impacts on climate change because the City's Reach Codes allow exceptions to the requirement for all-electric buildings (i.e., no natural gas). Therefore, the proposed DTPP Plan-Wide Amendments would not necessarily result in full implementation of all-electric building development, and effects related to GHG emissions were therefore conservatively determined to be significant and unavoidable. The Reduced Development Alternative would similarly comply with the City's Reach Codes, which allow exceptions to the requirement for all-electric buildings, resulting in the same potentially significant cumulative climate change impacts as with the project. Mitigation Measure CC-1 would apply to this alternative.

Noise and Vibration

As discussed in Chapter 11, *Noise and Vibration*, the proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to temporary construction noise from subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-1: Construction Noise Reduction. With the same land uses at a reduced intensity, the Reduced Development Alternative could result in similar, albeit somewhat lesser, construction noise impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-1.

The proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to permanent increases in building equipment noise from subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-2: Operational Noise Performance Standard.

With the same land uses at a reduced intensity in at least some of the same locations, the Reduced Development Alternative could result in similar, albeit somewhat lesser, building equipment noise impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-2. Like the proposed DTPP Plan-Wide Amendments, the Reduced Development Alternative would result in less-than-significant traffic noise impacts because traffic volumes would increase by a lesser amount than would trigger an impact; this less-than-significant impact would be somewhat less substantial with the Reduced Development Alternative, compared to the proposed DTPP Plan-Wide Amendments, because of this alternative's somewhat lesser traffic volumes (approximately 5 percent fewer daily vehicle trips than with the proposed Transit District DTPP Amendments).

The proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to groundborne vibration from construction of subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-3: Vibration Reduction. With the same land uses at a reduced intensity, the Reduced Development Alternative could result in similar, albeit somewhat lesser, construction-generated vibration impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-3.

Effects related to airport noise would be less than significant with the Reduced Development Alternative, as would be the case for the proposed DTPP Plan-Wide Amendments because the 60, 65, 70, and 75 CNEL noise contours for San Carlos Airport do not extend into the City of Redwood City.

Population and Housing

As discussed in Chapter 5, *Population and Housing*, the proposed DTPP Plan-Wide Amendments would have less-than-significant impacts with respect to population and housing because it would not induce substantial unplanned growth and would not result in residential displacement. With the same land uses at a reduced intensity, the Reduced Development Alternative would likewise have less-than-significant impacts with respect to population and housing.

Regarding jobs/housing balance—although not explicitly identified as a topic for consideration under CEQA—the Reduced Development Alternative would have essentially the same ratio of jobs to employed residents as would the proposed project, because it would reduce both office space and residential units by approximately one-third compared to the proposed DTPP Plan-Wide Amendments. As a result, the Reduced Development Alternative would have a jobs/housing ratio of 4.2 jobs per employed resident (based on 1.5 employed residents per household, essentially the same as that of the proposed DTPP Plan-Wide Amendments, and substantially greater than the current citywide ratio of 1.6).

Public Services and Utilities and Infrastructure

As discussed in Chapter 8, *Public Services and Recreation*, the proposed DTPP Plan-Wide Amendments would have less-than-significant effects with respect to public services (police, fire, and emergency medical services; parks and recreational facilities; schools; and libraries). With

the same land uses at a reduced intensity in at least some of the same locations, the Reduced Development Alternative would likewise have less-than-significant impacts with respect to public services.

As discussed in Chapter 10, *Utilities and Infrastructure*, the proposed DTPP Plan-Wide Amendments would have less-than-significant effects with mitigation with respect to water supply. Accordingly, the proposed DTPP Plan-Wide Amendments would also have less-than-significant impacts with respect to the construction of water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities; wastewater treatment capacity; and solid waste. The proposed DTPP Plan-Wide Amendments would also have less-than-significant impacts with respect to water quality; groundwater recharge; storm drainage; flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and consistency with a water quality control plan or sustainable groundwater management plan. With the same land uses at a reduced intensity in at least some of the same locations, the Reduced Development Alternative would likewise have less-than-significant impacts with respect to utilities and infrastructure (including hydrology and water quality). In particular, the Reduced Development Alternative would generate about two-thirds of the proposed DTPP Plan-Wide Amendments' water demand and likewise would result in about two-thirds of the wastewater treatment demand. Mitigation measures included to reduce the impacts of development allowed by the DTPP Plan-Wide Amendments on water supplies would similarly reduce impacts of development allowed under the Reduced Development Alternative to less than significant.

Other Impacts

Effects related to the footprint of subsequent development projects would generally be the same as or similar to those of the proposed DTPP Plan-Wide Amendments. This is because the locations of subsequent development projects would not necessarily change, although lesser office development would occur within the amended DTPP area.³ Because any change in the footprint or size of subsequent development projects, if any, cannot be known at this time, it is assumed that excavation could potentially disturb archaeological or tribal cultural resources, potentially occur on expansive soil, and potentially disturb paleontological resources to the same or a similar degree as would be the case with the proposed DTPP Plan-Wide Amendments. Likewise, the Reduced Development Alternative could result in the same or similar disturbance of nesting birds and removal of trees that could result from construction of subsequent development projects in the amended DTPP area, and could result in new shading affecting shadow-sensitive uses. Finally, this alternative could, like the proposed DTPP Plan-Wide Amendments, result in the same or similar development on potentially expansive or corrosive soils. Each of these impacts—Impact AE-5, CR-2, CR-4, BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, GEO-4, and GEO-6—would be less than significant with mitigation under the Reduced Development Alternative, as would be the case with the proposed DTPP Plan-Wide Amendments.

³ This chapter of the SEIR refers to the “amended DTPP area” to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

Conclusion

As discussed above, the Reduced Development Alternative would not eliminate the significant and unavoidable impacts associated with the project because there is still the possibility that individual development projects would affect historic resources, result in significant criteria pollutant emissions, and generate GHG emissions in excess of those anticipated in regional/State plans. Conversely, the Reduced Development Alternative would result in a new significant impact, compared with the proposed DTPP Plan-Wide Amendments, in that VMT per employee under this alternative would increase slightly compared to that with the proposed DTPP Plan-Wide Amendments, and the increase would be sufficient to result in an exceedance of the City's VMT significance threshold. Additional mitigation would be required, compared to that required under the proposed DTPP Plan-Wide Amendments, in the form of enhanced TDM programs for commercial uses. This would reduce the potential employee VMT impact to a less-than-significant level. With reduced development, the alternative would reduce the severity of certain of the significant impacts associated with the DTPP Plan-Wide Amendments that would be reduced to less than significant with the implementation of mitigation measures identified in this SEIR; among these impacts reduced in severity would be a reduction in criteria pollutant emissions and construction and traffic noise and decreased demand for utilities, notably including water (and wastewater treatment). The mitigation measures would still be required, and conclusions of the EIR would remain the same with the Reduced Development Alternative.

The Reduced Development Alternative would address each of the City's objectives for the proposed project, but to a lesser degree than would the proposed DTPP Plan-Wide Amendments.

Alternative 3: Altered Land Use Mix Alternative

Under Alternative 3, the Altered Land Use Mix Alternative, impacts related to the intensity of development would generally be reduced, compared to the DTPP Plan-Wide Amendments, due to the nearly 50 percent reduction in assumed office space. The number of residential units assumed would be one-third greater than under the DTPP Plan-Wide Amendments; however, the overall square footage of development would be about 15 percent lower than with the project (but about 25 percent greater than with Alternative 2). Specifically, potential impacts to criteria air pollutant, toxic air contaminant, and greenhouse gas emissions; noise and vibration; population and employment; and demand for public services and utilities, would generally be reduced, compared to those of the proposed DTPP Plan-Wide Amendments. Nonetheless, potentially significant and unavoidable impacts resulting from the DTPP Plan-Wide Amendments, would remain (generally, with reductions, compared to the severity of project impacts) under this alternative, as described further below.

Cultural and Historic Resources and Tribal Cultural Resources

The Altered Land Use Mix Alternative could still develop projects in place of, or adjacent to, eligible historic structures. As a result, adverse impacts to historic structures could occur. Mitigation Measure CR-1 (formerly Mitigation Measure 7-2 from the DTPP Final EIR with clarifying amendments) would still be required to preliminarily determine whether or not the project may have a potentially significant adverse effect on the historic resource. This assessment

and reporting would be done on a project-by-project basis within the DTPP. Mitigation Measure CR-2 (formerly Mitigation Measure 7-4 from the DTPP Final EIR with clarifying amendments) would still be required to review proposed development adjacent to a historic resource to determine whether such development could adversely affect an adjacent historic resource. Further, Mitigation Measure NO-3 (formerly Mitigation Measure 11-3 from the DTPP Final EIR with clarifying amendments) would be required to reduce ground-borne vibration levels, which primarily occurs during construction. While these mitigation measures would reduce the severity of impacts to historic structures, they would not necessarily reduce the impacts to a less-than-significant level. Thus, while effects to historic resources could be less under this alternative due to its reduced office development, the impact would remain significant and unavoidable just as with the proposed DTPP Plan-Wide Amendments.

Transportation and Circulation

As explained in Chapter 9, *Transportation and Circulation*, all impacts of the proposed DTPP Plan-Wide Amendments would be less than significant and no mitigation measures would be required. The proposed DTPP Plan-Wide Amendments would be consistent with the General Plan transportation goals; would not conflict with any of the overarching transportation goals of the existing DTPP or RWCMoves; and would increase transit ridership, which would not result in a significant adverse effect on the environment. Because it would result in an increase, compared to existing conditions, of office and residential uses in proximity to a transit station and other comparable uses, the Altered Land Use Mix Alternative would likewise be consistent with the General Plan, DTPP, and RWCMoves, and would increase transit ridership, although by a lesser amount than would the proposed DTPP Plan-Wide Amendments. Related effects of the Altered Land Use Mix Alternative would be less than significant, as with the proposed DTPP Plan-Wide Amendments.

The Altered Land Use Mix Alternative would result in approximately 2 percent fewer daily vehicle trips and an approximately 7 percent decrease in total daily vehicle miles traveled (VMT) under cumulative conditions, compared to the proposed DTPP Plan-Wide Amendments. (Compared to Alternative 2, this alternative would generate about 2 percent more trips but approximately the same total VMT.) However, as shown in **Table 19-4**, the Altered Land Use Mix Alternative would generate more VMT per employee than would the proposed DTPP Plan-Wide Amendments, and would exceed the City's significance threshold of 15.0 VMT per employee, which would be a new significant effect of the Altered Land Use Mix Alternative. Accordingly, more robust TDM programs for uses generating employment (i.e., general office, R&D Laboratory) would be required to comply with the City's TDM Ordinance, compared to that required under the proposed DTPP Plan-Wide Amendments. This would reduce the potential employee VMT impact to a less-than-significant level. Residential VMT would be incrementally greater than with the proposed DTPP Amendments, but would remain below the City's VMT threshold. (Both employee and residential VMT per capita would be very similar to those of the Reduced Development Alternative.)

TABLE 19-4
VMT ANALYSIS RESULTS FOR ALTERED LAND USE MIX ALTERNATIVE

Scenario	VMT	VMT Threshold	Exceeds Threshold?
Residential Project Components			
Existing	8.5	10.5 VMT per capita	n/a
Proposed Project	8.2		No
Altered Land Use Mix Alternative	8.3		No
Office (General Employment) Project Components			
Existing	17.3	15.0 VMT per employee	n/a
Proposed Project	14.9		No
Altered Land Use Mix Alternative	16.1		Yes

NOTES:

n/a = Existing VMT is not evaluated against threshold.

Bold-face text indicates significant impact.

SOURCE: Fehr & Peers, 2022.

The proposed DTPP Plan-Wide Amendments would have less-than-significant impacts with respect to safety hazards and emergency access. Because it would develop similar land uses and the intensity of office uses would be lower, the Altered Land Use Mix Alternative would similarly result in less than significant impacts.

Air Quality and Climate Change

Like the proposed Transit District DTPP Amendments, the Altered Land Use Mix Alternative would result in a lesser percentage increase in VMT than in service population, and therefore this alternative would not conflict with or obstruct implementation of the applicable air quality plan, and the Plan-level impact would be less than significant, as with the proposed Transit District DTPP Amendments. However, as discussed in Chapter 12, *Air Quality*, and Chapter 17, *Cumulative Impacts*, and above, the analysis in this SEIR conservatively concludes that the proposed DTPP Plan-Wide Amendments could result in a significant unavoidable impact with respect to emissions of criteria air pollutants from individual subsequent development project(s) (Impacts AQ-2 and C-AQ-1). This is because the BAAQMD thresholds of significance with respect to criteria air pollutants for revisions to a plan (consistency with current air quality plan control measures, and projected VMT or vehicle trip increase is less than or equal to projected population increase) differ from the criteria pollutant thresholds of significance for individual projects, which are based on comparison to specific quantities of daily and annual project emissions. Implementation of Mitigation Measures AQ-2a and AQ-2b would reduce the impact, but it cannot be stated with certainty that impacts from all subsequent development projects would be less than significant, even with mitigation.

The Altered Land Use Mix Alternative would develop about half the office space and about one-third more residential units as compared to the proposed DTPP Plan-Wide Amendments. The overall intensity of development would be about 15 percent less than that of the proposed project, making it somewhat less likely that one or more individual projects could exceed the BAAQMD

screening thresholds; however, as with the proposed DTPP Plan-Wide Amendments, it cannot be stated with certainty that, under the Altered Land Use Mix Alternative, impacts from all subsequent development projects would be less than significant, even with mitigation. Therefore, this SEIR conservatively concludes that the Altered Land Use Mix Alternative, like the DTPP Plan-Wide Amendments, would have a significant unavoidable impact with respect to emissions of criteria air pollutants from individual subsequent development project(s). The foregoing conclusion would also apply to the cumulative impact with respect to emissions of criteria air pollutants from individual subsequent development project(s) (Impact C-AQ-1): this impact would be significant and unavoidable for the Altered Land Use Mix Alternative, as it would be for the proposed DTPP Plan-Wide Amendments.

Like the proposed project, this alternative would create potentially significant construction-related health risks resulting from TAC emissions by diesel construction equipment. Implementation of Mitigation Measure AQ-3a would reduce this impact to a less-than-significant level, as with the proposed DTPP Plan Amendments. In terms of potential operational health risks, this alternative, like the proposed DTPP Plan Amendments, would result in an increase in diesel truck traffic and the addition of diesel-powered backup generators and fire pumps (required for buildings over about 85 feet in height), and could accommodate R&D Laboratory use in some of the space assumed as office use. This impact would be potentially significant. Accordingly, Mitigation Measures AQ-3b and AQ-3c would be applicable to this alternative, and would reduce potential health risk impacts to a less-than-significant level.

Other air quality impacts of the proposed DTPP Plan-Wide Amendments would be less than significant, in some cases with mitigation. The proposed DTPP Plan-Wide Amendments would have a less-than-significant impact with respect to compliance with BAAQMD's *2017 Clean Air Plan*, with which the proposed DTPP Plan-Wide Amendments would be consistent. Because it would develop the office and residential uses in proximity to a transit station and other comparable uses in at least some of the same locations, albeit at a reduced overall intensity (considerably less office space), the Altered Land Use Mix Alternative would likewise be consistent with the applicable clean air plan and would have a less-than-significant impact.

Given its lesser increase in VMT than in service population, at a plan level, the proposed DTPP Plan-Wide Amendments would have a less-than-significant impact with respect to its cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The Altered Land Use Mix Alternative would similarly develop office and residential uses in proximity to a transit station and other comparable uses in at least some of the same locations, albeit at a reduced intensity. However, as shown in Table 19-4, this alternative would result in greater VMT per employee and per resident than would the proposed DTPP Plan-Wide Amendments. Nevertheless, like the project, this alternative would have a less-than-significant impact because total cumulative VMT would increase from existing conditions at a lesser rate (31 percent) than would service population (52 percent).

Subsequent development proposed under the DTPP Plan-Wide Amendments would not include any major sources of odor, and therefore odor impacts would be less than significant. With the

same land uses at a reduced overall intensity, the Altered Land Use Mix Alternative would likewise have less-than-significant odor impacts.

As discussed in Chapter 13, *Climate Change*, even with implementation of Mitigation Measure CC-1, the proposed DTPP Plan-Wide Amendments could result in significant impacts on climate change because the City's Reach Codes allow exceptions to the requirement for all-electric buildings (i.e., no natural gas). Therefore, the proposed DTPP Plan-Wide Amendments would not necessarily result in full implementation of all-electric building development, and effects related to GHG emissions were therefore conservatively determined to be significant and unavoidable. The Reduced Development Alternative would similarly comply with the City's Reach Codes, which allow exceptions to the requirement for all-electric buildings, resulting in the same potentially significant cumulative climate change impacts as with the project. Mitigation Measure CC-1 would apply to this alternative.

Noise and Vibration

As discussed in Chapter 11, *Noise and Vibration*, the proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to temporary construction noise from subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-1: Construction Noise Reduction. With the same land uses at a somewhat reduced overall intensity, the Altered Land Use Mix Alternative could result in similar, albeit somewhat lesser, construction noise impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-1.

The proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to permanent increases in building equipment noise from subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-2: Operational Noise Performance Standard. With the same land uses at a reduced intensity in at least some of the same locations, the Altered Land Use Mix Alternative could result in similar, albeit somewhat lesser, building equipment noise impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-2. Like the proposed DTPP Plan-Wide Amendments, the Altered Land Use Mix Alternative would result in less-than-significant traffic noise impacts because traffic volumes would increase by a lesser amount than would trigger an impact; this less-than-significant impact would be somewhat less substantial with the Altered Land Use Mix Alternative, compared to the proposed DTPP Plan-Wide Amendments, because of this alternative's somewhat lesser traffic volumes (approximately 2 percent fewer daily vehicle trips than with the proposed Transit District DTPP Amendments).

The proposed DTPP Plan-Wide Amendments could potentially result in a significant impact related to groundborne vibration from construction of subsequent individual development project(s). However, this impact would be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-3: Vibration Reduction. With the same land uses at a reduced intensity, the Altered Land Use Mix Alternative could result in similar, albeit somewhat

lesser, construction- generated vibration impacts. These impacts would likewise be mitigated to a less-than-significant level with implementation of Mitigation Measure NO-3.

Effects related to airport noise would be less than significant with the Altered Land Use Mix Alternative, as would be the case for the proposed DTPP Plan-Wide Amendments because the 60, 65, 70, and 75 CNEL noise contours for San Carlos Airport do not extend into the City of Redwood City.

Population and Housing

As discussed in Chapter 5, *Population and Housing*, the proposed DTPP Plan-Wide Amendments would have less-than-significant impacts with respect to population and housing because it would not induce substantial unplanned growth and would not result in residential displacement. With the same land uses at a reduced intensity, the Altered Land Use Mix Alternative would likewise have less-than-significant impacts with respect to population and housing.

Regarding jobs/housing balance—although not explicitly identified as a topic for consideration under CEQA—the Altered Land Use Mix Alternative would have a considerably lower ratio of jobs to employed residents as would the proposed DTPP Plan-Wide Amendments, because this alternative would reduce office space by almost 50 percent while increasing the number of residential units by approximately one-third, compared to the proposed DTPP Plan-Wide Amendments. As a result, the Altered Land Use Mix Alternative would have a jobs-housing ratio of 1.6 jobs per employed resident, the same as the current citywide ratio for Redwood City, and considerably lower than the proposed DTPP Plan-Wide Amendments’ ratio of 4.1 and the Reduced Development Alternative’s ratio of 4.2.

Public Services and Utilities and Infrastructure

As discussed in Chapter 8, *Public Services and Recreation*, the proposed DTPP Plan-Wide Amendments would have less-than-significant effects with respect to public services (police, fire, and emergency medical services; parks and recreational facilities; schools; and libraries). With the same land uses at a reduced intensity in at least some of the same locations, the Altered Land Use Mix Alternative would likewise have less-than-significant impacts with respect to public services.

As discussed in Chapter 10, *Utilities and Infrastructure*, the proposed DTPP Plan-Wide Amendments would have less-than-significant effects with mitigation with respect to water supply. The proposed DTPP Plan-Wide Amendments would also have less-than-significant impacts with respect to the construction of water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities; wastewater treatment capacity; and solid waste. The proposed DTPP Plan-Wide Amendments would also have less-than-significant impacts with respect to water quality; groundwater recharge; storm drainage; flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; and consistency with a water quality control plan or sustainable groundwater management plan. With the same land uses at a reduced intensity in at least some of the same locations, the Altered Land Use Mix Alternative would likewise have less-than-significant impacts with respect to utilities and infrastructure (including hydrology and water

quality). In particular, the Altered Land Use Mix Alternative would generate about two-thirds of the proposed DTPP Plan-Wide Amendments' water demand and likewise would result in about two-thirds of the wastewater treatment demand.⁴ Mitigation measures included to reduce the impacts of development allowed by the DTPP Plan-Wide Amendments on water supplies would similarly reduce impacts of development allowed under the Altered Land Use Mix Alternative to less than significant.

Other Impacts

Effects related to the footprint of subsequent development projects would generally be the same as or similar to those of the proposed DTPP Plan-Wide Amendments. This is because the locations of subsequent development projects would not necessarily change, although lesser office development would occur within the amended DTPP area.⁵ Because any change in the footprint or size of subsequent development projects, if any, cannot be known at this time, it is assumed that excavation could potentially disturb archaeological or tribal cultural resources, potentially occur on expansive soil, and potentially disturb paleontological resources to the same or a similar degree as would be the case with the proposed DTPP Plan-Wide Amendments. Likewise, the Altered Land Use Mix Alternative could result in the same or similar disturbance of nesting birds and removal of trees that could result from construction of subsequent development projects in the amended DTPP area, and could result in new shading affecting shadow-sensitive uses. Finally, this alternative could, like the proposed DTPP Plan-Wide Amendments, result in the same or similar development on potentially expansive or corrosive soils. Each of these impacts—Impact AE-5, CR-2, CR-4, BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, GEO-4, and GEO-6—would be less than significant with mitigation under the Altered Land Use Mix Alternative, as would be the case with the proposed DTPP Plan-Wide Amendments.

Conclusion

As discussed above, the Altered Land Use Mix Alternative would not eliminate the significant and unavoidable impacts associated with the project because there is still the possibility that individual development projects would affect historic resources, result in significant criteria pollutant emissions, and generate GHG emissions in excess of those anticipated in regional/State plans. Conversely, the Altered Land Use Mix Alternative would result in a potential new significant impact, compared with the proposed DTPP Plan-Wide Amendments, in that VMT per employee under this alternative would increase slightly compared to that with the proposed DTPP Plan-Wide Amendments, and the increase would be sufficient to result in an exceedance of the City's VMT significance threshold. Additional mitigation would be required, compared to that required under the proposed DTPP Plan-Wide Amendments, in the form of enhanced TDM programs for commercial uses. This would reduce the potential employee VMT impact to a less-than-significant level. With Altered Land Use Mix, the alternative would reduce the severity of certain of the significant impacts associated with the DTPP Plan-Wide Amendments that would

⁴ Residential use generates more than four times the water demand as non-residential use, on a per-square-foot basis.

⁵ This chapter of the SEIR refers to the "amended DTPP area" to make it evident that the evaluation of existing conditions and potential project impacts encompasses the DTPP area as it may be expanded northward in the future to accommodate the proposed Gatekeeper Project at 651 El Camino Real. Any such amendment would be considered by City decision-makers on a project specific basis.

be reduced to less than significant with the implementation of mitigation measures identified in this SEIR. Among these impacts reduced in severity would be a reduction in criteria pollutant emissions and construction and traffic noise and decreased demand for utilities, notably including water (and wastewater treatment). The mitigation measures would still be required, and conclusions of the EIR would remain the same with the Altered Land Use Mix Alternative.

The Altered Land Use Mix Alternative would address each of the City's objectives for the proposed project, but to a lesser degree than would the proposed DTPP Plan-Wide Amendments.

19.7 Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. Section 15126.6 (e)(2) of the State CEQA Guidelines requires that an environmentally superior alternative be designated and states that if the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

From the alternatives evaluated in this SEIR, the environmentally superior alternative would be Alternative 1 – the No Project/Existing DTPP Alternative. This alternative would avoid all significant impacts associated with the proposed project.

In accordance with the CEQA Guidelines, if the No Project Alternative is identified as the environmentally superior alternative, an environmentally superior alternative must then be selected from the remaining alternatives. Therefore, Alternative 2, the Reduced Development Alternative, would be the environmentally superior alternative. Alternative 2 would entail approximately 34 percent less office and residential development than with the DTPP Plan-Wide Amendments and because the intensity of development would be reduced, there would be reductions in air emissions, noise, and demand for utilities and services.

The Reduced Development Alternative would not avoid the significant, unmitigable impacts of the proposed DTPP Plan-Wide Amendments. Specifically, this alternative would have significant unavoidable impacts on cultural (historical) resources (Impacts CR-1 and C-CR-1); criteria air pollutant emissions (Impacts AQ-2 and C-AQ-1); greenhouse gases (Impacts CC-1, CC-2, and C-CC-1). Nevertheless, on the whole, due to the overall reduced scale of development, this alternative was found to provide a greater decrease in significant environmental impacts, compared to those of the proposed project, than the other alternatives considered.

It should be noted, however, that to the extent that the demand for additional developed space that would otherwise be built pursuant to the proposed project would be met elsewhere in the Bay Area, employees in and residents of such development could potentially generate greater impacts on transportation systems (including vehicle miles traveled), air quality, and greenhouse gases than would be the case for development on the more compact and better-served-by-transit project site. This would be particularly likely for development in more outlying parts of the region where fewer services and less transit access is provided. While it would be speculative to attempt to quantify or specify the location where such development would occur and the subsequent impacts thereof, it is

acknowledged that the Reduced Development Alternative would incrementally reduce local impacts in and around the project site and in Downtown Redwood City, while potentially increasing regional emissions of criteria air pollutants and greenhouse gases, as well as regional traffic congestion. This alternative could also incrementally increase impacts related to “greenfield” development on previously undeveloped locations in the Bay Area and, possibly, beyond.

CHAPTER 20

Report Preparers

20.1 City of Redwood City

Community Development and Transportation Department

Sue Exline, Assistant Community Development and Transportation Director/ Planning Manager
Anna McGill, Principal Planner, Planning Services
William Chui, Senior Planner, Planning Services
Jessica Manzi, Transportation Manager, Engineering and Transportation Services
Phong Du, Supervising Civil Engineer, Engineering and Transportation Services
Ahmad Haya, Senior Civil Engineer, Engineering and Transportation Services
James O’Connell, Senior Civil Engineer, Engineering and Transportation Services
Alex Chan, Assistant Engineer II, Engineering and Transportation Services
Apollo Rojas, Senior Planner, Planning Services
Kristina Mateo, Administrative Secretary, Planning Services

Other Departments

Justin Chapel, Water Utilities Superintendent, Public Works Department
Joshua Chilton, Administrative Lieutenant, Police Department
Veronica Ramirez, City Attorney
Alexandra Barnhill, Special Counsel, Jarvis Fay LLP
Christine Crawl, Special Counsel, Jarvis Fay LLP

20.2 Others

Environmental Science Associates (Prime Consultant)

Hillary Gitelman, Project Director	Becky Urbano, Cultural (Historic)
Karl Heisler, Project Manager	Johanna Kahn, Cultural (Historic)
Shadde Rosenblum, Deputy Project Manager	Ashleigh Sims, Cultural (Archaeological)
Paul Mitchell, Deputy Project Manager	Michael Burns, Senior Geology, Hazards, Hydrology and Water Quality
Susan Yogi, Assistant Project Manager	Brandon Carroll, Geology, Hazards, Hydrology and Water Quality
Jyothi Iyer, Air Quality, Greenhouse Gas	Elliot Schwimmer, Land Use and Planning, Aesthetics and Shadow, Population and Housing
Brian Schuster, Air Quality, Greenhouse Gas	Chris Sanchez, Noise
Cheri Velzey, Air Quality	Nicholas Reynoso, Noise
Breanna Sewell, Air Quality, Greenhouse Gas	
Bailey Setzler, Air Quality	
Michelle Le, Air Quality	
Liza Ryan, Biology	

Jill Feyk-Miney, Public Services and
Recreation, Utilities and Service Systems
Ryan Yasuda, Public Services and
Recreation

Ron Teitel, Graphics
Drew Holstad, GIS
Lisa Bautista, Word Processing
Trevor Clark, Administration

Fehr & Peers (Transportation)

Franziska Church, Principal
Mark Soendjojo, Transportation Planner/Engineer II
Elynor(Xinyi) Zhou, Transportation Engineer/Planner
Zahra Khan, Transportation Engineer
Marcel Thomas, Administration

West Yost (Water Supply Evaluation and Water Utilities)

Elizabeth Drayer, Vice President
Polly Boissevain, Engineering Manager
Patrick Johnston, Principal Engineer

Wood Rodgers (Stormwater)

Dan Matthies, Vice President
Satish Kumar, Project Engineer

Woodard & Curran (Sanitary Sewer)

Gisa Ju, Senior Technical Practice Leader
Dave Richardson, Senior Principal