8 WASHINGTON STREET / SEAWALL LOT 351 PROJECT

CITY AND COUNTY OF SAN FRANCISCO PLANNING DEPARTMENT:
CASE NO. 2007.0030E

STATE CLEARINGHOUSE NO. 2007122027

DRAFT EIR PUBLICATION DATE: JUNE 15, 2011

DRAFT EIR PUBLIC HEARING DATE: JULY 21, 2011

DRAFT EIR PUBLIC COMMENT PERIOD:
JUNE 15, 2011 TO AUGUST 15, 2011

Written comments should be sent to:
Bill Wycko, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103
DATE:       June 15, 2011
TO:         Draft Environmental Impact Report Recipients
FROM:       Bill Wycko, Environmental Review Officer
SUBJECT:    Request for the Final Environmental Impact Report for the 8 Washington
            Street /Seawall Lot 351 Project (2007.0030E)

This is the Draft of the Environmental Impact Report (EIR) for the 8 Washington Street / Seawall Lot 351 Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, we will prepare and publish a document titled “Summary of Comments and Responses” that will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the San Francisco Planning Commission in an advertised public meeting(s) and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final EIR. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one, rather than two, documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments and Responses have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them. If you would like a copy of the Final EIR, therefore, please fill out and mail the postcard provided inside the back cover to the San Francisco Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.
8 Washington Street
/ Seawall Lot 351 Project

Draft Environmental Impact Report

City and County of San Francisco Planning Department:
Case No. 2007.0030E
State Clearinghouse No. 2007122027

Draft EIR Publication Date: June 15, 2011
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8 WASHINGTON STREET/SEAWALL LOT 351 PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT

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<td>ABAG</td>
<td>Association of Bay Area Governments</td>
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<td>AC Transit</td>
<td>Alameda-Contra Costa Transit District</td>
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<td>ADA</td>
<td>Americans with Disabilities Act</td>
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<td>ADRP</td>
<td>archaeological data recovery plan</td>
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<td>AMP</td>
<td>archaeological monitoring program</td>
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<td>ARDTP</td>
<td>Archaeological Research Design and Treatment Plan</td>
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<td>ATP</td>
<td>archaeological testing plan</td>
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<td>Bay Area Ozone Strategy</td>
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<td><em>California Clean Air Act</em></td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>SFBAAB</td>
<td>San Francisco Bay Area Air Basin</td>
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<tr>
<td>SFCD</td>
<td>San Francisco City Datum</td>
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<tr>
<td>SFHA</td>
<td>special flood hazard area</td>
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<tr>
<td>SFMTA</td>
<td>San Francisco Municipal Transportation Agency</td>
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<tr>
<td>SFPUC</td>
<td>San Francisco Public Utilities Commission</td>
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<tr>
<td>SFWP II</td>
<td>San Francisco Waterfront Partners II</td>
</tr>
<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
</tr>
<tr>
<td>sq. ft.</td>
<td>square feet</td>
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<tr>
<td>SSC</td>
<td>Species of Special Concern</td>
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<td>TAC</td>
<td>toxic air contaminants</td>
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<td>TEP</td>
<td>Transit Effectiveness Project</td>
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<td>TWL</td>
<td>total water level</td>
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<td>U.S. 101</td>
<td>U.S. Highway 101</td>
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<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
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<td>USFWS</td>
<td>United States Fish and Wildlife Service</td>
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<tr>
<td>WB</td>
<td>westbound</td>
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INTRODUCTION

On January 3, 2007, an environmental evaluation application (EE application) was filed by San Francisco Waterfront Partners II (the “project sponsor”) on behalf of the Golden Gateway Center1 for a project at 8 Washington Street and the adjacent Seawall Lot 351, which is owned by the Port of San Francisco (Port) and within the Port’s jurisdiction. (The Port is not a co-sponsor of the proposed project, but has authorized San Francisco Waterfront Partners II to submit an EE application that includes Seawall Lot 351.)

On August 15, 2008, the Port issued a Request for Proposals (RFP) for the development of Seawall Lot 351. The RFP was re-issued on November 10, 2008. Two parties submitted timely proposals: San Francisco Waterfront Partners II and a development group led by Dhaval Panchal (which later withdrew its proposal). On February 24, 2009, the Port Commission authorized Port staff to enter into an exclusive negotiating agreement with San Francisco Waterfront Partners II, finding that the proposal submitted by San Francisco Waterfront Partners II meets the requirements of the RFP and meets the Port’s objectives for Seawall Lot 351.

In February 2009, Supervisor David Chiu urged the Port of San Francisco to engage the San Francisco Planning Department to lead a planning analysis of the Port’s surface parking lots north of Market Street. The Port Commission funded a focused study managed by the Planning Department to foster community consensus on the future of Port Seawall Lot 351 and at other seawall lot properties on the northern waterfront. Public participation and comment was sought in a series of five public workshops. This work began in May 2009 and was completed in May 2010. The Planning Department published the results of its study in June 2010 in a document entitled Northeast Embarcadero Study: An Urban Design Analysis for the Northeast Embarcadero Area.2 On July 8, 2010, the San Francisco Planning Commission adopted a resolution that it “recognizes the design principles and recommendations of the Study” and “urges the Port of San Francisco to consider the recommendations of the Northeast Embarcadero Study when considering proposals for new development in the study area.” The Planning Commission resolution did not adopt the Northeast Embarcadero Study as a planning document. Rather, it represents a recommendation to the Port and other City departments that they consider the work of the Planning staff set forth in the Northeast Embarcadero Study in future deliberations. The resolution states that the Planning Commission did not commit to any project to be considered within the Northeast Embarcadero Study area in the future, and that no such project could be

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considered until after completion of environmental review under the California Environmental Quality Act (CEQA).

A. THE PROPOSED PROJECT

On July 27, 2010, an EE application for a revised project proposal (the proposed project) was submitted. (To distinguish the earlier version of the project as originally filed on January 3, 2007, from the project as currently proposed, the earlier version of the project is called “the initial project proposal.”) The proposed project is intended to respond to urban design recommendations of the Northeast Embarcadero Study. The proposed project calls for demolition of the existing health club facility and the existing surface parking lot on Seawall Lot 351, and construction of two residential buildings south of the Jackson Street alignment: one along The Embarcadero (four to six stories) and the other along Drumm Street (8 to 12 stories). The buildings would be connected at their ground floor. Together, the buildings would contain about 165 residential units, 420 underground parking spaces for residents and the public, and ground-floor retail and restaurant space. North of the building, a new publicly accessible open space would be constructed to align with Jackson Street. North of this open space, a new, one-story, fitness center building, two swimming pools, and four tennis courts would be constructed. The northern end of the site would contain a one-story restaurant building and a publicly accessible open space. The proposed project is described in greater detail in Chapter II, Project Description, of this Environmental Impact Report (EIR).

B. PURPOSE OF THIS ENVIRONMENTAL IMPACT REPORT

This EIR has been prepared by the City of San Francisco Planning Department, the Lead Agency for the proposed project, in conformance with the provisions of CEQA and the CEQA Guidelines (California Public Resources Code Sections 21000 et seq., and California Code of Regulations Title 14, Sections 1500 et seq., “CEQA Guidelines”), both as amended. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As defined in CEQA Guidelines Section 15382, a “significant effect on the environment” is:

. . . a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. 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.

As stated in the CEQA Guidelines, an EIR is an “informational document” intended to inform public agency decision-makers and the public of the significant environmental effects of a
project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. CEQA provides that public agencies should not approve projects until all feasible means available have been employed to substantially lessen the significant environmental effects of such projects.3 City decision-makers will use the certified EIR, along with other information and public processes, to determine whether to approve, modify, or disapprove the proposed project, and to specify any applicable environmental conditions as part of project approvals.

C. ENVIRONMENTAL REVIEW PROCESS

Under the San Francisco Administrative Code, Chapter 31, the Planning Department is responsible for CEQA review for all City and County of San Francisco projects and serves as the Lead Agency. The EIR process as implemented by the Planning Department includes several steps: public scoping, preparation of an Initial Study, publication of a Draft EIR for public review and comment, preparation of responses to public comments on the Draft EIR, and certification of the Final EIR.

NOTICE OF PREPARATION/INITIAL STUDY

A Notice of Preparation of an EIR/Initial Study (the “NOP/Initial Study”) was prepared for the initial project proposal and was issued on December 8, 2007 (included in this EIR as Appendix A) to focus the scope of the EIR on potentially significant effects of the proposed project. Publication of the NOP/Initial Study initiated a 30-day public comment period, and comment letters were submitted to the Planning Department during this period. These were reviewed and considered in preparation of the EIR analysis. See Areas of Controversy and Issues to Be Resolved, in Chapter V, Other CEQA Issues.

Environmental Effects Found to Be Less than Significant in the NOP/Initial Study

The following potential individual and cumulative environmental effects of the initial project proposal were determined either to be less than significant or to be reduced to a less-than-significant level through recommended mitigation measures included in the NOP/Initial Study:

- Land Use (all topics, but will be discussed in the EIR for informational purposes);
- Aesthetics (light and glare);
- Population and Housing (all topics);

3 “Feasible” means capable of being accomplished in a successful manner within a reasonable period of time taking into account economic, environmental, social, and technological factors (Public Resources Code Section 21061.1).
Introduction

- Cultural and Paleontological Resources (historical architectural resources, unique paleontological or geologic resources);
- Transportation and Circulation (air traffic patterns, emergency access);
- Noise (all topics);
- Air Quality (exposure of sensitive receptors, odors, greenhouse gas emissions);
- Wind; 4
- Recreation (all topics);
- Utilities and Service Systems (all topics);
- Public Services (all topics);
- Biological Resources (all topics);
- Geology and Soils (all topics);
- Hydrology and Water Quality (all topics);
- Hazards/Hazardous Materials (all topics);
- Minerals/Energy Resources (all topics); and
- Agricultural Resources (all topics).

Although the NOP/Initial Study was prepared for the initial project proposal, the conclusions of the NOP/Initial Study continue to be applicable to the proposed project with respect to each of the topics that are determined either to be less than significant or to be reduced to a less-than-significant level through recommended mitigation measures included in the NOP/Initial Study. The proposed project would occupy the same site as the initial project proposal and, like the initial project proposal, would call for disturbance of the entire project site. The proposed project would include a substantially similar mix and quantity of uses as the initial project proposal and would include a comparable number of residential units (slightly fewer at 165 residential units compared to 170 under the initial project proposal). Impacts identified as less than significant or less than significant with mitigation in the NOP/Initial Study for the initial project proposal (population and housing; historical architectural resources, unique paleontological and geologic resources; air traffic patterns and emergency access; noise; utilities and service systems; public

Because the proposed project would be taller than the initial project proposal (up to 12 stories compared to 8 stories under the initial project proposal), there is a potential for greater impacts related to wind under the proposed project. Donald Ballanti, Certified Consulting Meteorologist, has evaluated the probable wind effects of the currently proposed project. See Don Ballanti, *Wind Impact Evaluation for the Proposed 8 Washington Street Project*, San Francisco, August 1, 2010. As with the project design evaluated in the Initial Study, the report concludes that the proposed project does not have the potential to cause significant changes in the pedestrian wind environment. “The site is within a ‘wind shadow’ of nearby buildings, is of modest height when compared to nearby buildings, and has a complex design unlikely to focus wind energy at ground level.” The report is on file with the Planning Department, 1650 Mission Street, Suite 400, and is available for public review as part of the project file.
services; biological resources; geology and soils; hydrology and water quality; hazards/hazardous materials; mineral/energy resources; and agricultural resources) would be substantially the same or similar under the proposed project. No further study of these topics is therefore required in the EIR.

**Environmental Effects Requiring Further Study in the EIR**

The NOP/Initial Study determined that implementation of the initial project proposal may result in potentially significant environmental impacts related to the following environmental topics: Aesthetics; Archaeological Resources; Transportation; and Shadow. This determination is equally applicable to the proposed project because of its similarities to the initial project proposal as previously explained. Therefore, further study of these topics is required in this EIR. In addition, the topic of Land Use is studied in this EIR for informational purposes.

The Planning Department has also determined that a number of environmental topics that the NOP/Initial Study eliminates from further study in the EIR should be restudied in the EIR. The topic of Air Quality is restudied in the EIR (except for the odors subtopic) under current Bay Area Air Quality Management District CEQA Guidelines, adopted in June 2010 after publication of the NOP/Initial Study. The topic of Greenhouse Gas Emissions is restudied in the EIR due to increasing concern and awareness about this issue since publication of the NOP/Initial Study, and to conform to current approaches developed by the Planning Department to address the issue under CEQA. The topic of Recreation is restudied in the EIR in response to concerns about impacts on recreation raised in comments on the NOP/Initial Study. The topic of Sea Level Rise is studied in the EIR due to increasing concern and awareness about this issue since publication of the NOP/Initial Study, and in response to concerns raised in comments on the NOP/Initial Study. The topic of Biological Resources is restudied in the EIR due to the publication of the draft Standards for Bird-Safe Buildings in October 2010 after publication of the NOP/Initial Study.

**DRAFT EIR**

The Planning Department will distribute the Draft EIR to State agencies through the State Clearinghouse, to local agencies, and to interested members of the public. Copies of the Draft EIR can be obtained by request from the Planning Department, and are available online through the Planning Department’s website. Following publication of the Draft EIR, there will be a 45-day comment period (which is identified on the cover of this Draft EIR). Readers are invited to submit written comments on the adequacy and accuracy of the Draft EIR by the close of the public comment period.
Introduction

CEQA Guidelines Section 15096(d) calls for responsible agencies to provide comments on those project activities with the agencies’ areas of expertise and to support those comments with either oral or written documentation.\(^5\)

Written comments should be submitted to:

Bill Wycko, Environmental Review Officer

c/o 8 Washington Street Draft EIR

San Francisco Planning Department

1650 Mission Street, Suite 400

San Francisco, CA 94103

In addition, a public hearing will be held before the Planning Commission to solicit public comment on the adequacy and accuracy of the Draft EIR. The public hearing on this Draft EIR has been scheduled for July 21, 2011 in Room 400 City Hall, Dr. Carleton B. Goodlett Place, beginning at 1:30 or later (call 414-588-6422 during the week of the hearing for a recorded message giving a more specific time).

FINAL EIR

After the close of the comment period, written responses to comments will be prepared to address comments received on environmental issues and any revisions to the Draft EIR will be identified. A Summary of Comments and Responses document will be presented to the Planning Commission along with the Draft EIR for consideration of certification of a Final EIR.

The Planning Commission, Port Commission, and Board of Supervisors will use the information in a Final EIR in their deliberations on whether to approve, modify, or deny the proposed project. If the Commission decides to approve the proposed project, it must include in its approval action findings that identify significant impacts that would result; discuss mitigation measures or alternatives that have been adopted to reduce significant impacts to less-than-significant levels; determine whether mitigation measures or alternatives are within the jurisdiction of other public agencies; and explain reasons for rejecting mitigation measures or alternatives if any are infeasible for legal, social, economic, technological, or other reasons.

A Mitigation Monitoring and Reporting Plan (MMRP) must be adopted by the Planning Commission, Port Commission, and Board of Supervisors as part of the adoption of the CEQA findings and project approvals by those bodies to the extent that mitigation measures are made part of the proposed project. The MMRP identifies the measures included in the proposed project, the entities responsible for carrying out the measures, and timing of implementation. If significant unavoidable impacts remain after all feasible mitigation measures are included, the

\(^5\) CEQA Guidelines Section 21069 defines a responsible agency as a public agency, other than the lead agency, which has responsibility for carrying out or approving a project.
approving body, if it elects to approve the proposed project, must adopt a statement of overriding considerations explaining how the benefits of the proposed project outweigh the significant impacts.

D. ORGANIZATION OF THE EIR DOCUMENT

This EIR is organized into seven chapters, plus technical appendices. This Introduction is followed by Chapter I, Summary, which provides a summary of the proposed project and its significant environmental impacts. The Summary chapter also identifies the mitigation measures and improvement measures that could avoid or reduce significant impacts. It also includes a comparative table of project alternatives.

Chapter II, Project Description, presents details about the proposed project and the approvals required to implement it. The Project Description chapter also identifies the project sponsor and project objectives.

Chapter III, Plans and Policies, discusses the potential of the proposed project to conflict with applicable plans and policies.

Chapter IV, Environmental Setting and Impacts, is organized by environmental topic and addresses ten topics: Land Use; Aesthetics; Archaeological Resources; Transportation; Air Quality; Greenhouse Gases; Shadow; Recreation; Sea Level Rise; and Biological Resources. (Other environmental topics are addressed in Appendix A, NOP/Initial Study.)

Chapter V, Other CEQA Issues, addresses other topics required in an EIR by the CEQA Guidelines: growth-inducing impacts; significant, unavoidable, irreversible effects associated with the project; and areas of known controversy.

Chapter VI, Alternatives to the Proposed Project, presents and analyzes a range of alternatives to the proposed project: Alternative A: No Project; Alternative B: Existing Height and Bulk; Alternative C: Public Trust Conforming; Alternative D: Develop Only 8 Washington Lots; and Alternative E: Develop Only 8 Washington Lots under Existing Height and Bulk with No Conditional Use. This chapter also identifies the environmentally superior alternative and discusses alternatives considered but rejected.

Chapter VII, Authors and Persons Consulted, identifies the EIR authors and the agencies, organizations, and individuals who were contacted during preparation of the Draft EIR.

Two appendices are presented: Appendix A: Notice of Preparation/Initial Study, and Appendix B: Project Plans.
I. SUMMARY

A. PROJECT SYNOPSIS

The proposed project calls for demolition of the existing health club facility and the existing surface parking lot on Seawall Lot 351, and construction of two residential buildings south of the Jackson Street alignment: one along The Embarcadero (four to six stories) and the other along Drumm Street (8 to 12 stories). The buildings would be connected at their ground floor. Together, the buildings would contain about 165 residential units, 420 underground parking spaces for residents and the public, and ground-floor retail and restaurant space. North of the buildings, a new publicly accessible open space would be constructed to align with Jackson Street. North of this open space, a new, one-story, fitness center building, two swimming pools, and four tennis courts would be constructed. The northern end of the site would contain a one-story restaurant building and a publicly accessible open space.

B. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table I-1 summarizes the impacts of the proposed project identified in this EIR and, where applicable, the associated mitigation measures identified in the EIR.

Table I-2 summarizes the significant impacts identified in the NOP/Initial Study for which mitigation measures identified in the NOP/Initial Study would reduce impacts to a less-than-significant level.
### Table I-1: Summary of Environmental Effects and Mitigation Measures Identified in the EIR

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<thead>
<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
<th>Impact Significance With Mitigation</th>
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<tbody>
<tr>
<td><strong>LAND USE</strong></td>
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<tr>
<td>LU-1: The proposed project would not physically divide an established community.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>LU-2: The proposed project would not have a substantial impact on the existing character of the vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<td>LU-3: The proposed project would not result in a significant cumulative impact related to Land Use.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<td><strong>AESTHETICS</strong></td>
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<td>AE-1: The proposed project would not substantially affect scenic vistas and scenic resources visible from publicly accessible areas in the project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>AE-2: The proposed project would not substantially alter the existing visual character of the project site and its surroundings.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>AE-3: The proposed project would not result in a significant cumulative impact related to Aesthetics.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<td><strong>ARCHAEOLOGICAL RESOURCES</strong></td>
<td></td>
<td>Mitigation Measure M-CP-1a: Archaeological Testing, Monitoring and Data Recovery and Reporting</td>
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<tr>
<td>CP-1: Project construction activities could disturb the remains of the Bethel (and possibly other scuttled Gold Rush era ships).</td>
<td>S</td>
<td>Mitigation Measure M-CP-1a:Archaeological Testing, Monitoring and Data Recovery and Reporting</td>
<td>LS-MM</td>
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<td>Based on a reasonable presumption that archaeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archaeological consultant from the pool of qualified archaeologists maintained by the Planning Department Archaeologist. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the consultant shall be available to conduct an archaeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant’s</td>
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- work shall be conducted in accordance with this measure and with the requirements of the project archeological research design and treatment plan (Archeo-Tec. *Archaeological Research Design/Treatment Plan for the 8 Washington Street Project, January 2003; and Addendum Archaeological Research Design and Treatment Plan for the 8 Washington Street Project, June 2007*) at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project archeological research design and treatment plan and of this archeological mitigation measure, the requirement of this archeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archaeological resource as defined in *CEQA Guidelines* Section 15064.5 (a)(c).

**Archaeological Testing Program**

The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to the ERO. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, the ERO in consultation with the archaeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:
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<td>A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or</td>
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<td>B) A data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</td>
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Archaeological Monitoring Program (AMP)

If the ERO in consultation with the archaeological consultant determines that an archaeological monitoring program shall be implemented, the archaeological monitoring program shall minimally include the following provisions:

- The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils-disturbing activities commencing. The ERO in consultation with the archaeological consultant shall determine what project activities shall be archaeologically monitored. In most cases, any soils-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- The archaeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource;
- The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits;
- The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile-driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile-driving activity may affect an archaeological resource, the pile-driving activity...
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<td>shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to the ERO. Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO.</td>
<td><strong>Archaeological Data Recovery Program</strong>&lt;br&gt;The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. The scope of the ADRP shall include the following elements:&lt;br&gt;- <strong>Field Methods and Procedures.</strong> Descriptions of proposed field strategies, procedures, and operations.&lt;br&gt;- <strong>Cataloguing and Laboratory Analysis.</strong> Description of selected cataloguing system and artifact analysis procedures.&lt;br&gt;- <strong>Discard and Deaccession Policy.</strong> Description of and rationale for field and post-field discard and deaccession policies.&lt;br&gt;- <strong>Interpretive Program.</strong> Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program.&lt;br&gt;- <strong>Security Measures.</strong> Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities.&lt;br&gt;- <strong>Final Report.</strong> Description of proposed report format and distribution of results.&lt;br&gt;- <strong>Curation.</strong> Description of the procedures and recommendations for the curation of...</td>
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## Impact Significance Without Mitigation

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<td>any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.</td>
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### Human Remains and Associated or Unassociated Funerary Objects

The treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner’s determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archaeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

### Final Archaeological Resources Report

The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historic Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.
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<tr>
<td>Implementation of the approved plan for testing, monitoring, and data recovery under Mitigation Measure Cultural-1 would ensure that the information potential of archaeological resources that may be encountered during construction of the project would be preserved and/or realized. With this mitigation, the proposed project would not have a significant impact on archaeological resources.</td>
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</table>

**Mitigation Measure M-CP-1b: Interpretation**

Based on a reasonable presumption that archaeological resources may be present within the project site, and that the potential significance of some such resources may be may be premised on CRHR Criteria 1 (Events), 2 (Persons), and/or 3 (Design/Construction), the following measure shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources.

The project sponsor shall implement an approved program for interpretation of resources. The project sponsor shall retain the services of a qualified archaeological consultant having expertise in California urban historical and marine archaeology. The archaeological consultant shall develop a feasible, resource-specific program for post-recovery interpretation of resources. The particular program for interpretation of artifacts that are encountered within the project site will depend upon the results of the data recovery program and will be the subject of continued discussion between the ERO, consulting archaeologist, and the project sponsor. Such a program may include, but is not limited to, any of the following (as outlined in the ARDTP): surface commemoration of the original location of resources; display of resources and associated artifacts (which may offer an underground view to the public); display of interpretive materials such as graphics, photographs, video, models, and public art; and academic and popular publication of the results of the data recovery.

The archaeological consultant’s work shall be conducted at the direction of the ERO, and in consultation with the project sponsor. All plans and recommendations for interpretation by the consultant shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO.

**CP-2:** Project construction activities could disturb the remains of wharf structures.

S  See Mitigation Measures M-CP-1a and M-CP-1b.

**CP-3:** Project construction activities could disturb the remains of wharf-side discards.

S  See Mitigation Measures M-CP-1a and M-CP-1b.
### Impacts

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<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
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<tbody>
<tr>
<td>CP-4: Project construction activities could disturb the remains of the Old Seawall.</td>
<td>S</td>
<td>See Mitigation Measures M-CP-1a and M-CP-1b.</td>
<td>LS-MM</td>
</tr>
<tr>
<td>CP-5: Project construction activities could disturb the remains of 19th century commercial and residential deposits.</td>
<td>S</td>
<td>See Mitigation Measures M-CP-1a and M-CP-1b.</td>
<td>LS-MM</td>
</tr>
<tr>
<td>CP-6: Project construction activities could disturb unknown remains.</td>
<td>S</td>
<td>Mitigation Measure M-CP-6: Accidental Discovery</td>
<td>LS-MM</td>
</tr>
</tbody>
</table>

The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a)(c). The project sponsor shall distribute the Planning Department archeological resource “ALERT” sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken, each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of a qualified archeological consultant. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. If the archeological consultant determines that continuation of construction in the vicinity of the archeological resource may have a significant impact on the resources, the consultant shall provide recommendations to the ERO regarding how to avoid such an impact. Based on the recommendations reviewed and
### Impacts

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<tbody>
<tr>
<td>CP-7: Project construction activities would have the potential to contribute to cumulative impacts related to Archaeological Resources.</td>
<td>S</td>
<td>See Mitigation Measures M-CP-1a and M-CP-1b.</td>
<td>LS -MM</td>
</tr>
<tr>
<td>TRANSPORTATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TR-1: The proposed project would not result in significant transportation impacts in the proposed project vicinity due to vehicle traffic.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
</tbody>
</table>

Approved by the ERO, the ERO shall require such specific additional measures to be implemented by the project sponsor that the ERO finds necessary to implement the approved consultant’s recommendations.

Measures might include: preservation in situ of the archeological resource; an archaeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The EP division of the Planning Department shall receive three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.
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<th>Mitigation Measures</th>
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<tbody>
<tr>
<td>TR-2: The proposed project would not result in significant impacts to transit systems in the proposed project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-3: The proposed project would not result in significant impacts to pedestrians in the proposed project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-4: The proposed project would not result in significant transportation impacts to bicycles in the proposed project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-5: The proposed project would not result in a significant impact related to an increase in the number of vehicles parking in the project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-6: The proposed project would not result in a significant unmet need for loading spaces.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-7: The proposed project would not impair emergency vehicle access near the project site.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-8: Construction of the proposed project would not cause a significant increase in traffic near the project site.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>TR-9: The proposed project would make a considerable contribution to cumulative traffic impacts at study intersections.</td>
<td>S</td>
<td>Mitigation Measure M-TR-9: Travel Demand Management Plan  The project sponsor will develop and implement a basic Travel Demand Management (TDM) Plan for the residential and commercial uses at the site. The Plan will build upon those TDM elements already being provided as part of the Proposed Project, such as secured bicycle parking and care share spaces, to which it will add additional components such as facilitating maps of local pedestrian and bicycle routes, transit stops and routes, and providing a taxi call service for the restaurant. The mitigation measure will be triggered if and at the time the changes to The Embarcadero/Washington Street identified in the NES are implemented.</td>
<td>SU-MM</td>
</tr>
<tr>
<td>TR-10: The proposed project would not make a considerable contribution to a significant cumulative impact on transit systems in the proposed project vicinity.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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</table>
### AIR QUALITY

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<tr>
<th>Impacts</th>
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<th>Mitigation Measures</th>
<th>Impact Significance With Mitigation</th>
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<tbody>
<tr>
<td><strong>AQ-1:</strong> Construction of the proposed project would not violate an air quality standard or contribute to an existing or projected air quality violation, either individually or cumulatively.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td><strong>AQ-2:</strong> The proposed project would not result in significant impacts related to fugitive dust resulting from project construction activities.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td><strong>AQ-3:</strong> Construction of the proposed project would expose sensitive receptors to substantial levels of PM2.5 and other TACs, including DPM.</td>
<td>S</td>
<td>Mitigation M-AQ-3: Construction Equipment</td>
<td>SU-MM</td>
</tr>
</tbody>
</table>

All off-road construction equipment shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. The following types of equipment were identified as candidates for retrofitting with CARB-certified Level 3 verified diesel emission controls (Level 3 VDECs, which are capable of reducing DPM emissions by 85% or better), due to their expected operating modes (i.e., fairly constant use at high revolution per minute):

- Excavators
- Backhoes
- Rubber-Tired Dozers
- Concrete Boom Pumps
- Concrete Trailer Pumps
- Concrete Placing Booms
- Soil Mix Drill Rigs
- Soldier Pile Rigs
- Shoring Drill Rigs

All diesel generators used for project construction must meet Tier 4 emissions standards. As described previously, modeling default equipment inventories were used because site specific information not available at the time of this analysis; hence, the equipment listed above may or may not be used for the project. To the extent that the above listed types of equipment are used for project construction, those equipment types will be required to meet DPM emission standards equivalent to Tier 3 (Tier 2 if greater than 750 hp) engines with Level 3 VDECs, if feasible. For the purposes of this mitigation measure, “feasibility” refers to the availability of newer equipment in the subcontractor’s fleet that meets these standards, or the availability of older equipment in the subcontractor’s fleet that can be feasibly modified to incorporate Level 3 VDECs. It should be noted that for specialty equipment types (e.g. drill
### Impacts

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#### AQ-4: Operation of the proposed project would not violate an air quality standard or make a cumulatively considerable contribution to an existing or projected air quality violation.

- **Significance:** LS
- **Mitigation Measures:** None Required
- **Result:** LS

#### AQ-5: The proposed project would not result in substantial levels of CO and would not make a cumulatively considerable contribution to existing levels of CO.

- **Significance:** LS
- **Mitigation Measures:** None Required
- **Result:** LS

#### AQ-6: Operation of the proposed project would expose sensitive receptors to substantial levels of PM$_{2.5}$ and other TACs.

- **Significance:** S
- **Mitigation Measures:** Mitigation M-AQ-6: Emergency Generator Emissions Standards and Operating Hours
  
  To ensure that health risk impacts from the proposed project do not result in significant impacts to on- and off-site sensitive receptors, the project’s emergency generator shall meet the following requirements:
  
  1. The project sponsor shall ensure that the emergency generator proposed as part of the project meets the emissions standards equivalent to a Tier 2 engine equipped with a Level 3 verified emissions control device; and
  2. The project sponsor shall ensure that ongoing testing of this generator is limited to no more than 35 hours per year; and
  
  The project sponsor shall maintain records of annual fuel use and operating hours and shall make those records available to the ERO upon request.
- **Result:** SU-MM

#### AQ-7: The proposed project would expose new (on-site) sensitive receptors to significant levels of PM$_{2.5}$ and other TACs from a single source.

- **Significance:** S
- **Mitigation Measures:** Mitigation M-AQ-7: Building Design and Ventilation Requirements
  
  The project sponsor shall submit a ventilation plan for the proposed buildings. The ventilation plan shall show that the building ventilation systems remove at least 80 percent of the PM$_{2.5}$ pollutants from habitable areas. The ventilation system shall be designed by an engineer certified by ASHRAE, who shall provide a written report documenting that the system offers the best available technology to minimize outdoor to indoor transmission of air pollution. In addition to installation of an air filtration system, the project sponsor shall present a plan that ensures ongoing maintenance for the ventilation and filtration systems. The project sponsor shall also ensure the disclosure to buyers and renters regarding the findings of the analysis and inform occupant’s proper use of any installed air filtration system.
- **Result:** SU-MM
### Impacts

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<th>Significance</th>
<th>Mitigation Measures</th>
<th>Significance With Mitigation</th>
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<tbody>
<tr>
<td>AQ-8: The proposed project would expose new (on-site) sensitive receptors to cumulatively considerable levels of PM$_{2.5}$ and other TACs from off-site and on-site sources.</td>
<td>S</td>
<td>See Mitigation Measures M-AQ-6 and M-AQ-7, above.</td>
<td>SU-MM</td>
</tr>
<tr>
<td>AQ-9: Project operations would result in considerable contribution to already cumulatively significant levels of PM$_{2.5}$ and other TACs on off-site sensitive receptors.</td>
<td>S</td>
<td>See Mitigation Measure M-AQ-6, above.</td>
<td>LS-MM</td>
</tr>
<tr>
<td>AQ-10: Project construction activities would result in a considerable contribution to cumulatively significant levels of PM$_{2.5}$ and other TACs on off-site receptors.</td>
<td>S</td>
<td>See Mitigation Measure M-AQ-3, above.</td>
<td>SU-MM</td>
</tr>
<tr>
<td>AQ-11: The proposed project would not conflict with or obstruct implementation of the 2010 Clean Air Plan.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td><strong>GREENHOUSE GASES</strong></td>
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<tr>
<td>GG-1: The proposed project would generate greenhouse gas emissions, but not in levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td><strong>SHADOW</strong></td>
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<tr>
<td>SH-1: The proposed project would not adversely affect the use of any park or open space under the jurisdiction of the Recreation and Park Commission.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>SH-2: The proposed project would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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</table>
## I. Summary

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
<th>Impact Significance With Mitigation</th>
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<tbody>
<tr>
<td><strong>SH-3</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td></td>
<td>The proposed project would not result in a significant cumulative impact related to Shadow.</td>
<td></td>
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<tr>
<td><strong>RECREATION</strong></td>
<td></td>
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<tr>
<td><strong>RE-1</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>The construction of recreational facilities as part of the proposed project would not result in adverse physical effects on the environment.</td>
<td></td>
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<tr>
<td><strong>RE-2</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>The proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, or create a need for new or physically altered park or recreational facilities beyond those included as part of the proposed project.</td>
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<tr>
<td><strong>RE-3</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>The proposed project would not have a significant adverse effect on recreational opportunities.</td>
<td></td>
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<tr>
<td><strong>RE-4</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>The proposed project would not result in a significant cumulative impact related to Recreation.</td>
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<tr>
<td><strong>SEA LEVEL RISE</strong></td>
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<tr>
<td><strong>SLR-1</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>The proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.</td>
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<tr>
<td><strong>SLR-2</strong></td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>The proposed project would not expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow.</td>
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<tr>
<td>Impacts</td>
<td>Impact Significance Without Mitigation</td>
<td>Mitigation Measures</td>
<td>Impact Significance With Mitigation</td>
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<tr>
<td>SLR-3: The proposed project would expose people or structures to increased risk of flooding due to climate-induced sea level rise.</td>
<td>S</td>
<td>Mitigation Measure M-SLR-3: Emergency Plan The project sponsor, in conjunction with the building manager, shall prepare an initial Emergency Plan that shall include at a minimum: monitoring by the building manager of agency forecasts of tsunamis and floods, methods for notifying residents and businesses of such risks, and evacuation plans. The plan shall be prepared prior to occupancy of any part of the proposed project. The building manager shall maintain and update the Emergency Plan annually. The building manager shall provide educational meetings for residents and businesses at least three times per year and conduct drills regarding the Emergency Plan at least once per year.</td>
<td>SU-MM</td>
</tr>
<tr>
<td>SLR-4: The proposed project would not result in a significant cumulative impact related to Sea Level Rise.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
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<tr>
<td>BIOLOGICAL RESOURCES</td>
<td></td>
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<tr>
<td>BI-1: The project 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.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
<tr>
<td>BI-2: The project would remove migratory bird habitat and impede the use of nesting (nursery) sites.</td>
<td>S</td>
<td>Mitigation Measure M-BI-2: Vegetation Removal During the Non-Breeding Season or Preconstruction Survey Vegetation removal activities for the proposed project shall be conducted during the non-breeding season (i.e., September through February) to avoid impact to nesting birds or preconstruction surveys shall be conducted for work scheduled during the breeding season (March through August). Preconstruction surveys shall be conducted by a qualified ornithologist, authorized by CDFG to conduct such activities, to determine if any birds are nesting in or in the vicinity of vegetation. The preconstruction survey shall be conducted within 15 days prior to the start of work from March through May (since there is higher potential for birds to initiate nesting during this period), and within 30 days prior to the start of work from June through August. If active songbird nests are found in the work area, a buffer of 50 feet between the nest and work area shall be established. If active raptor nests are found in the work area, a buffer of 200 feet shall be established between the nest and the work area. No work will be allowed with the buffer(s) until the young have successfully fledged. In some</td>
<td>LS-MM</td>
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<td>Impacts</td>
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<td>Mitigation Measures</td>
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<tr>
<td>BI-3: The proposed project would not conflict with local policies or ordinances protecting biological resources.</td>
<td>LS</td>
<td>None Required</td>
<td>LS</td>
</tr>
</tbody>
</table>
| BI-4: The new buildings would adversely impact bird movement and migration. | S | Mitigation Measure M-BI-4: Conformity with the Planning Department’s Standards for Bird-Safe Buildings  
The proposed project shall conform with the applicable requirements of San Francisco Planning Department Standards for Bird-Safe Buildings, Public Review Draft, October 2010 that would apply to the proposed project. In the event that Standards for Bird Safe Buildings are adopted and effective at the time a building permit for the proposed project is sought, the proposed project shall comply with the adopted Standards in addition to any provisions contained in the Public Review Draft, October 2010, not included in the adopted Standards that, in the judgment of the ERO, would provide greater protection for birds. | LS-MM |
| BI-5: The proposed project would not result in substantial adverse cumulative effects related to Biological Resources. | LS | None Required | LS |
Table I-2: Summary of Improvement Measures Identified in the EIR

<table>
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<th>Improvement Measures</th>
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<tbody>
<tr>
<td><strong>TRANSPORTATION</strong></td>
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<tr>
<td>TR-1: The proposed project would not result in significant</td>
<td>LS</td>
<td><strong>Improvement Measure TR-1: Garage Signage</strong></td>
</tr>
<tr>
<td>transportation impacts in the project vicinity due to vehicle traffic.</td>
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<td>To minimize the possibility of traffic congestion due to vehicles queuing on</td>
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<td></td>
<td>Washington Street when entering the proposed garage, an electronic sign, to be</td>
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<td>activated when the garage is full, will be installed by the garage entrance on</td>
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<td></td>
<td></td>
<td>Washington Street. The sign will also direct motorists towards the Golden Gateway</td>
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<td>garage (1,350 spaces), located two blocks to the west of the project site, as an</td>
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<td>alternative parking location.</td>
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<tr>
<td>TR-3: The proposed project would not result in significant</td>
<td>LS</td>
<td><strong>Improvement Measure TR-3: Pedestrian Alert Device</strong></td>
</tr>
<tr>
<td>impacts to pedestrians in the proposed project vicinity.</td>
<td></td>
<td>The project sponsor will install an audible and visual device at the garage entrance</td>
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<td></td>
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<td>to automatically alert pedestrians when a vehicle is exiting the facility.</td>
</tr>
<tr>
<td>TR-8: Construction of the proposed project would not cause a significant</td>
<td>LS</td>
<td><strong>Improvement Measure TR-8a: Limitation on Trucking Hours</strong></td>
</tr>
<tr>
<td>increase in traffic near the project site.</td>
<td></td>
<td>During construction, the project sponsor agrees to limit truck movements to the hours</td>
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<td></td>
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<td>between 9 AM and 3:30 PM (or other times, if approved by SFMTA) to minimize</td>
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<td></td>
<td>construction traffic occurring between 7 and 9 AM or between 3:30 and 6 PM peak</td>
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<td></td>
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<td>traffic hours, when trucks could temporarily impede traffic and transit flow.</td>
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<td></td>
<td></td>
<td><strong>Improvement Measure TR-8b: Agency Consultation</strong></td>
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<td></td>
<td></td>
<td>The project sponsor and construction contractor(s) will meet with the Traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Engineering Division of SFMTA, the Fire Department, Muni, and the Planning Department</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to determine the best method to minimize traffic congestion and potential negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>effects to pedestrian or bicycle circulation during construction of the proposed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>project.</td>
</tr>
</tbody>
</table>
Table I-3: Summary of Mitigation Measures and Improvement Measures Identified in the NOP/Initial Study

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOISE</strong></td>
<td>S</td>
<td><strong>Mitigation Measure Noise-1: Construction Noise</strong></td>
</tr>
<tr>
<td>The proposed project would expose persons to pile driving noise during foundation construction</td>
<td></td>
<td>Pile driving would be required for this project. The project sponsor shall require construction contractors to pre-drill site holes to the maximum depth feasible based on soil conditions. The project sponsor shall also require that contractors schedule pile-driving activity for times of the day that would be in accordance with the provisions of the San Francisco Noise Ordinance and in consultation with the Director of Public Works, to disturb the fewest people. Contractors shall be required to use construction equipment with state-of-the-art noise shielding and muffling devices. At least 48 hours prior to pile-driving activities, the project sponsor shall notify building owners and occupants within 200 feet of the project site by fliers posted on each floor in each building and distributed by building management of the dates, hours, and expected duration of such activities.</td>
</tr>
</tbody>
</table>

|                                                                 | S                                     | Mitigation Measure Noise-2: Title 24 Compliance                                      |
| Residents of the proposed project would be exposed to traffic noise along adjacent roadways. |                                       | The project sponsor shall conduct a detailed analysis of noise reduction requirements for the proposed buildings. Noise insulation features identified and recommended by the analysis shall be included in the building design, as specified in the San Francisco General Plan Land Use Compatibility Guidelines for Community Noise to reduce potential interior noise levels to the maximum extent feasible. | LS-MM |

| **AIR QUALITY**                                                       | S                                     | **Mitigation Measure AQ-1: Construction Air Quality**                                |
| Project construction activities would expose nearby receptors to pollutants. |                                       | The project sponsor shall require the contractor(s) to spray the site with water during demolition, excavation, and construction activities; spray unpaved construction areas with water at least twice per day; cover stockpiles of soil, sand, and other material; cover trucks hauling debris, soils, sand or other such material; and sweep surrounding streets during demolition, excavation, and construction at least once per day to reduce particulate emissions. (See San Francisco Building Code Section 106A.3.2.6 and San Francisco Health Code Article 22b, which supersede the dust control mitigation measures of the NOP/Initial Study.) | LS-MM |
| (Note that air quality impacts of project construction are discussed in the EIR due to adoption of BAAQMD CEQA Guidelines in June 2010 after publication of the NOP/Initial Study.) |                                       | Ordinance 175-91, passed by the Board of Supervisors on May 6, 1991, requires that non-potable water be used for dust control activities. Therefore, the project sponsor shall require that the contractor(s) obtain reclaimed water from the Clean Water Program for this purpose. |
I. Summary

### Impacts

<table>
<thead>
<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
<th>Impact Significance With Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without Mitigation</td>
<td>Mitigation Measures</td>
<td>The project sponsor shall require the project contractor(s) to maintain and operate construction equipment so as to minimize exhaust emissions of particulates and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs to reduce emissions for equipment that would be in frequent use for much of the construction period. The project sponsor shall require the construction contractor(s) to implement one or more additional measures to reduce construction exhaust emissions of PM$<em>{10}$. These measures include (but are not limited to) the use of late-model or retrofitted equipment; the use of PurinOx or other fuel additives; the use of ultra-low-sulfur fuel; and/or the use of PM$</em>{10}$ particulate traps.</td>
<td></td>
</tr>
</tbody>
</table>

### BIOLOGICAL RESOURCES

Project construction activities could disturb nesting birds.

(Nota the topic of Biological Resources is restudied in the EIR and that the NOP/Initial Study analysis of Biological Resources is superseded by that of the EIR.)

See Mitigation Measure M-BI-2 in Table I-1, above.

### HAZARDS AND HAZARDOUS MATERIALS

If hazardous materials are present in the soil, groundwater, or within existing buildings on the project site, project site clearance, demolition, grading, and excavation activities could result in a release of hazardous materials.

S Mitigation Measure Hazards-1: Flammable Vapors During Construction

The project sponsor shall implement a soil vapor survey to evaluate the presence of potentially flammable vapors prior to final design of the proposed building. Should the survey identify the potential presence of flammable vapors at levels greater than the lower flammability limit or lower explosive limit, then the project sponsor shall require the construction contractor to include measures to control flammable gases during construction (such as ventilation) in the construction site safety plan and to implement these measures.

Mitigation Measure Hazards-2: Vapor Intrusion During Operation

Based on the results of the soil vapor survey conducted in accordance with Mitigation Measure Hazards-1, the project sponsor shall perform a screening evaluation to assess the worst-case risks related to vapor intrusion into the subsurface structure following construction. Should the screening evaluation indicate substantial risk, then the project sponsor shall conduct additional site characterization as necessary and conduct a site-specific evaluation, including fate and transport modeling, to more accurately evaluate site risks. Should the site-specific evaluation indicate significant risks, then the project sponsor shall require the construction contractor to implement additional measures to control vapor intrusion.

LS-MM
<table>
<thead>
<tr>
<th>Impacts</th>
<th>Impact Significance Without Mitigation</th>
<th>Mitigation Measures</th>
<th>Impact Significance With Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>indicate substantial risk, the project sponsor shall implement either soil and/or groundwater remediation to remove vapor sources or engineering measures such as a passive or active vent system and a membrane system to control intrusion of vapors into the proposed structure and conduct long-term monitoring for potential intrusion of vapors until risk-based cleanup levels have been met. The degree of monitoring would depend upon site specific conditions and the level of volatile organic compounds present. These actions shall be conducted in accordance with the California Department of Toxic Substances Control guidance, <em>Interim Final, Guidance for Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air</em> dated December 15, 2004, revised February 7, 2005 or the current version of this guidance at the time of construction. The screening level and site-specific evaluations shall be conducted under the oversight of the SFDPH and methods for compliance with this measure shall be specified in the site mitigation plan prepared in accordance with Article 22A of the San Francisco Health Code and subject to review and approval by the SFDPH.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C. SUMMARY OF PROJECT ALTERNATIVES

Five alternatives are evaluated in this EIR. Alternative A: No Project; Alternative B: Existing Height and Bulk; Alternative C: Public Trust Conforming; Alternative D: Develop Only 8 Washington Lots; and Alternative E: Develop Only 8 Washington Lots Under Existing Height and Bulk with No Conditional Use. Impacts of each alternative, with respect to each environmental topic covered in the EIR, are summarized and compared to the proposed project in Table I-3 at the end of this section.

ALTERNATIVE A - NO PROJECT ALTERNATIVE

The proposed project includes the construction of two primarily residential buildings with 165 units and approximately 41,900 gross square feet (gsf) of retail and health club uses; replacement of the outdoor athletic club facilities with four tennis courts and two swimming pools; provision of public and private open space on the project site; and construction of an underground garage with up to 420 public and private parking spaces. Under the No Project Alternative, these uses would not be developed on the project site, and there would be no zoning map amendment to change the existing 84-E height and bulk controls. The existing Golden Gateway Tennis & Swim Club facility would continue to operate on the 8 Washington lots (the lots owned by Golden Gateway Center: Assessor’s Block 201/Lot 12, Block 171/Lot 69, and Block 168/Lot 58). The 105-space surface parking lot would remain on Seawall Lot 351, the lot owned by the Port of San Francisco.

ALTERNATIVE B: EXISTING HEIGHT AND BULK

This alternative would call for development of the project site under the existing RC-4 (Residential/Commercial Combined: High Density) zoning district and the existing 84-E height and bulk district. Under this alternative, as with the proposed project, Seawall Lot 351 would be combined with the Golden Gateway Tennis & Swim Club lots. The project sponsor would develop the project site with two buildings: a south building (south of the Jackson Street alignment) along The Embarcadero, Washington Street, and Drumm Street; and a north building (north of the Jackson Street alignment). The south building would be four to six stories tall (40 to 65 feet tall) and would include about 194 residential units. Like the proposed project, the south building would include about 17,000 gsf of retail space and 12,100 gsf of restaurant space at the ground floor. The north building would also be four to six stories tall (40 to 65 feet tall) and would include about 103 residential units, for a total of about 297 residential units (132 units more than under the proposed project). The portion of both buildings fronting on The Embarcadero would be limited to 40 feet in height. A 12,800-gsf athletic club would be located in the ground floor of the north building. No tennis courts or outdoor swimming pools would be replaced under this alternative.
A two-level underground parking garage would be constructed beneath the south building. The parking garage would include 75 residential spaces and 120 public spaces, including 90 public spaces required by the Port of San Francisco (a total of 195 parking spaces, 225 spaces less than under the proposed project). As with the proposed project, the entrance and exit to the garage would be on Washington Street.

This alternative would provide publicly accessible open space in similar quantities, locations, and configurations as would the proposed project (including the proposed Jackson Common and the proposed Pacific Avenue Park).

**ALTERNATIVE C: PUBLIC TRUST CONFORMING**

Under this alternative, Seawall Lot 351 is combined with the 8 Washington lots and the project sponsor would develop the entire project, but a hotel would be developed on Seawall Lot 351 (a use that is consistent with the public trust), rather than the residential uses proposed under the proposed project. Under this alternative, the project sponsor would construct four buildings, similar in scale, configuration, location, and layout to the proposed project: a 4- to 6-story east building along The Embarcadero south of Jackson Street on Seawall Lot 351; an 8- to 12-story west building along Drumm Street south of Jackson Street on the 8 Washington Lots; a 1-story, 35-foot-tall athletic club building along The Embarcadero north of Jackson Street partially on Seawall Lot 351; and a 1-story, 15-foot-tall restaurant building at the north end of the project site. The west building would include about 111 residential units. The east building would include a hotel with approximately 160 guest rooms. Like the proposed project, the buildings would be connected at the ground level, which would include 17,000 gsf of retail space and 12,100 gsf of restaurant space. Like the proposed project, the athletic club building would be the same size as that of the proposed project (12,800 gsf) and would also have four ground-level tennis courts and two rooftop pools.

A two-level underground parking garage would be constructed beneath only the southern part of the 8 Washington lots (south of Jackson Street). No parking would be built under Seawall Lot 351. The parking garage would include 111 residential spaces and 112 public spaces, including 90 public spaces required by the Port of San Francisco (a total of 223 parking spaces). The entrance and exit to the garage would be on Washington Street.

This alternative would provide publicly accessible open space in similar quantities, locations, and configurations as with the proposed project.

**ALTERNATIVE D: DEVELOP ONLY 8 WASHINGTON LOTS**

Under this alternative, Seawall Lot 351 would continue in its current use as a surface parking lot. The project sponsor would develop the 8 Washington lots with two buildings: a south building (south of Jackson Street) along Drumm and Washington Streets, and a north building (north of...
I. Summary

Jackson Street). As with the proposed project, the south building would be up to 12 stories tall (up to 136 feet tall). It would include 141 residential units. The south building would include 17,000 gsf of retail space and 12,100 gsf of restaurant space at the ground floor. The north building would be up to five stories tall (up to 55 feet tall) and would include 21 residential units, for a total of 162 residential units, 3 units less than with the proposed project. A 12,900-gsf athletic club would be constructed on the ground floor of the north building. The athletic club would include three ground-level outdoor tennis courts and two ground-level outdoor pools in the northern part of the site.

A three-level underground parking garage would be constructed beneath the south building, and would not extend under Seawall Lot 351. The parking garage would include 162 residential spaces and 163 public spaces (a total of 325 parking spaces, 95 less than under the proposed project). The entrance and exit to the garage would be on Washington Street. Seawall Lot 351 would continue to provide 105 parking spaces.

This alternative would provide about 6,200 sq. ft. of publicly accessible open space along the Jackson Street alignment, and about 1,500 sq. ft. of publicly accessible open space at the north end of the site.

ALTERNATIVE E: DEVELOP ONLY 8 WASHINGTON LOTS UNDER EXISTING HEIGHT AND BULK WITH NO CONDITIONAL USE

Under this alternative, Seawall Lot 351 would continue in its current use as a surface parking lot, a use consistent with the public trust. The project sponsor would develop the 8 Washington lots with two buildings: a south building (south of Jackson Street) along Drumm and Washington Streets; and a north building (north of Jackson Street). The south building would be four stories tall (40 feet tall) and would include approximately 87 residential units. Like the proposed project, the south building would include 17,000 gsf of retail space and 12,100 gsf of restaurant space at the ground floor. The north building would contain four indoor tennis courts and would be approximately 40 feet tall, and would contain 30,000 gsf of indoor athletic club facilities. The athletic club would also include four rooftop outdoor tennis courts, and one ground-level outdoor tennis court (a total of nine tennis courts). The athletic club facility would also include two ground-level outdoor swimming pools.

A two-level, underground parking garage would be constructed beneath the south building. The parking garage would include 21 residential spaces and 120 public spaces (a total of 141 parking spaces). The entrance and exit to the garage would be on Washington Street. Seawall Lot 351 would continue to provide 105 parking spaces.

This alternative would provide about 6,200 sq. ft. of publicly accessible open space along Jackson Street and about 6,200 sq. ft. of publicly accessible open space at the end of Pacific Avenue.
### Table I-3: Comparison of Significant Impacts of the Proposed Project to Alternatives B, C, D, and E

<table>
<thead>
<tr>
<th>Description</th>
<th>Proposed Project</th>
<th>Alternative B: Existing Height and Bulk</th>
<th>Alternative C: Public Trust Conforming</th>
<th>Alternative D: Develop Only 8 Washington Lots</th>
<th>Alternative E: Develop only 8 Washington with Existing Height and Bulk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>4 buildings (12, 6, 1 and 1 stories)</td>
<td>2 buildings (6 stories)</td>
<td>4 buildings (12, 6, 1 and 1 stories)</td>
<td>2 buildings (12 and 5 stories)</td>
<td>2 buildings (4 stories)</td>
</tr>
<tr>
<td></td>
<td>(The 1-story athletic club building would be up to 35 feet tall)</td>
<td>297 residential units</td>
<td>(The 1-story athletic club building would be up to 35 feet tall)</td>
<td>162 residential units</td>
<td>87 residential units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17,000 gsf retail uses</td>
<td>12,100 gsf restaurant</td>
<td>17,000 gsf retail uses</td>
<td>17,000 gsf retail uses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12,800 gsf club</td>
<td>no tennis courts</td>
<td>12,100 gsf restaurant</td>
<td>12,100 gsf restaurant</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12,800 gsf club</td>
<td>30,000 gsf club</td>
</tr>
<tr>
<td></td>
<td>165 Residential Units</td>
<td>12,800 gsf club</td>
<td>111 residential units</td>
<td>12,800 gsf club</td>
<td>4 indoor + 4 outdoor tennis courts</td>
</tr>
<tr>
<td></td>
<td>17,000 gsf retail uses</td>
<td>no tennis courts</td>
<td>17,000 gsf retail uses</td>
<td>2 outdoor pools</td>
<td>2 outdoor pools</td>
</tr>
<tr>
<td></td>
<td>12,100 gsf restaurant</td>
<td></td>
<td>12,100 gsf restaurant</td>
<td>4 outdoor tennis courts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12,800 gsf club</td>
<td></td>
<td>12,800 gsf club</td>
<td>2 outdoor pools</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 tennis courts</td>
<td></td>
<td>4 outdoor tennis courts</td>
<td>160 hotel rooms on SWL 351</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 outdoor pools</td>
<td></td>
<td>2 outdoor pools</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Parking</strong></td>
<td>165 residential spaces</td>
<td>75 residential spaces</td>
<td>111 residential spaces</td>
<td>162 residential spaces</td>
<td>21 residential spaces</td>
</tr>
<tr>
<td></td>
<td>255 public spaces</td>
<td>120 public spaces</td>
<td>112 public spaces</td>
<td>163 public spaces</td>
<td>120 public spaces</td>
</tr>
<tr>
<td></td>
<td>420 total spaces</td>
<td>195 total spaces</td>
<td>223 total spaces</td>
<td>430 total spaces</td>
<td>246 total spaces</td>
</tr>
<tr>
<td><strong>Open Space</strong></td>
<td>23,800 sf</td>
<td>23,800 sf</td>
<td>23,800 sf</td>
<td>7,700 sf</td>
<td>12,400 sf</td>
</tr>
<tr>
<td><strong>Impacts</strong></td>
<td><strong>Land Use</strong></td>
<td>Less than significant</td>
<td>Greatest number of residential units compared to proposed project and other alternatives; remains less than significant.</td>
<td>Similar mix of uses, but hotel use in the east building; remains less than significant.</td>
<td>Similar to proposed project; remains less than significant.</td>
</tr>
<tr>
<td></td>
<td><strong>Aesthetics</strong></td>
<td>Less than significant</td>
<td>Lower in height south of Jackson Street, higher north of Jackson Street; greater horizontal bulk both north and south of Jackson Street;</td>
<td>Substantially the same as the proposed project.</td>
<td>Similar height south of Jackson street, higher north of Jackson Street; SWL 351 remains a parking lot; remains less than</td>
</tr>
</tbody>
</table>
## I. Summary

<table>
<thead>
<tr>
<th>Proposed Project</th>
<th>Alternative B: Existing Height and Bulk</th>
<th>Alternative C: Public Trust Conforming</th>
<th>Alternative D: Develop Only 8 Washington Lots</th>
<th>Alternative E: Develop only 8 Washington with Existing Height and Bulk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>remains less than significant.</td>
<td>significant.</td>
<td>remains less than significant.</td>
<td>remains a parking lot; remains less than significant.</td>
</tr>
<tr>
<td>Archeological Resources</td>
<td>Less than significant with mitigation</td>
<td>Greater ground disturbance north of Jackson Street; less ground disturbance south of Jackson Street; remains less than significant with mitigation.</td>
<td>Less than the proposed project due to shallower basement and no below grade parking on SWL 351; remains less than significant with mitigation.</td>
<td>Less ground disturbance south of Jackson Street; greater ground disturbance north of Jackson Street; remains less than significant with mitigation.</td>
</tr>
<tr>
<td>Transportation</td>
<td>Less than significant under existing plus project conditions. Significant and unavoidable under 2035 cumulative conditions.</td>
<td>Generates greatest number of trips compared to proposed project and other alternatives; remains less than significant under existing plus project conditions. Like the proposed project, this alternative would result in a significant and unavoidable impact under 2035 cumulative conditions.</td>
<td>More daily trips and more parking demand due to hotel; but LOS would not be affected, remains less than significant under existing plus project conditions. Like the proposed project, this alternative would result in a significant and unavoidable impact under 2035 cumulative conditions.</td>
<td>Fewer residences means fewer trips and lesser impacts than in the proposed project; remains less than significant under existing plus project conditions. Like the proposed project, this alternative would result in a significant and unavoidable impact under 2035 cumulative conditions. Generates fewest number of trips compared to proposed project and other alternatives; remains less than significant under existing plus project conditions. Like the proposed project, this alternative would result in a significant and unavoidable impact under 2035 cumulative conditions.</td>
</tr>
<tr>
<td>Air Quality</td>
<td>Construction and operation of the proposed project would expose new onsite receptors and existing offsite receptors to substantial levels of PM2.5 and other TACs. These impacts would be significant and unavoidable.</td>
<td>Would expose the greatest number of new onsite receptors to TACs compared to the proposed project and other alternatives; remains significant and unavoidable.</td>
<td>Remains significant and unavoidable.</td>
<td>Remains significant and unavoidable. Would expose the fewest number of new onsite receptors to TACs compared to the proposed project and other alternatives; remains significant and unavoidable.</td>
</tr>
<tr>
<td>Greenhouse Gases</td>
<td>Less than significant</td>
<td>Less than significant, assuming this alternative would comply with the Greenhouse Gas Compliance Checklist.</td>
<td>Less than significant, assuming this alternative would comply with the Greenhouse Gas Compliance Checklist.</td>
<td>Less than significant, assuming this alternative would comply with the Greenhouse Gas Compliance Checklist.</td>
</tr>
</tbody>
</table>
## I. Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shadow</td>
<td>Similar shadow on parks; more shadow on Drumm Street path; remains less than significant.</td>
</tr>
<tr>
<td></td>
<td>Substantially the same as proposed project.</td>
</tr>
<tr>
<td></td>
<td>Similar shadow on parks; more shadow on Drumm Street path; remains less than significant.</td>
</tr>
<tr>
<td>Recreation</td>
<td>Generates most new demand for recreational facilities compared to proposed project and other alternatives; remains less than significant.</td>
</tr>
<tr>
<td>Sea Level Rise</td>
<td>Would place greatest number of new residents in an area of increased risk of flooding due to sea level rise compared to proposed project and other alternatives; remains significant and unavoidable.</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>Similar to the proposed project.</td>
</tr>
<tr>
<td></td>
<td>Similar to the proposed project.</td>
</tr>
<tr>
<td></td>
<td>Similar to the proposed project.</td>
</tr>
<tr>
<td></td>
<td>Similar to the proposed project.</td>
</tr>
</tbody>
</table>
II. PROJECT DESCRIPTION

A. PROJECT LOCATION

The project site is located in downtown San Francisco, on the north side of Washington Street between The Embarcadero and Drumm Street. The overall shape of the project site is roughly a right triangle, bounded by The Embarcadero to the east, Washington Street to the south, and Drumm Street and a walkway and public utilities easement to the west. (See Figure II-1: Project Location.) The project site encompasses Assessor’s Block 168/Lot 58, Block 171/Lot 69, and Block 201/Lot 12, owned by the Golden Gateway Center; and Seawall Lot 351, which includes Block 201/Lot 13 and is owned by the Port. Overall, the project site encompasses approximately 138,681 square feet (sq. ft.) (3.2 acres).

EXISTING USES ON THE PROJECT SITE

The lots owned by the Golden Gateway Center are occupied by the Golden Gateway Tennis & Swim Club operated by Western Athletic Clubs. Seawall Lot 351 is occupied by a surface parking lot. The private athletic club has nine outdoor tennis courts, two outdoor swimming pools, and three permanent and four temporary structures on the project site. The tennis courts occupy approximately 59,400 sq. ft.; the pools and other outdoor club spaces total about 22,000 sq. ft. The three permanent structures with uses supporting the club are one-story buildings (with a half-story temporary structure atop one of the buildings) and contain approximately 4,600 gross square feet (gsf) of space (and site coverage of approximately 3,400 gsf). The three other temporary structures also support the club and contain approximately 300 gsf. The club also has a 17-space private parking lot. The parking lot on Seawall Lot 351 has 105 self-park spaces, including 10 unassigned spaces reserved for use by the Port of San Francisco. The entire Seawall Lot 351 is controlled by the ground lessee of the Ferry Building pursuant to a Parking Agreement with the Port, in satisfaction of parking rights granted to the Ferry Building ground lessee. The Ferry Building ground lessee operates the lot as a public pay lot through Ace Parking Management.

The northern part of the project site (north of the Jackson Street alignment) is comprised of two parcels. The northernmost parcel, Assessor’s Block 168/Lot 58, is a triangular lot covering about 12,638 sq. ft., with one tennis court. The southernmost parcel, Assessor’s Block 171/Lot 69, is a roughly rectangular lot covering about 47,681 sq. ft., with three tennis courts, a basketball

1 The Golden Gateway Tennis & Swim Club also operates an approximately 6,520-gsf health club facility, located across Drumm Street in Golden Gateway Center.
FIGURE II-1: PROJECT LOCATION

8 WASHINGTON STREET / SEAWALL LOT 351
2007.0030E

SOURCE: Turnstone Consulting
II. Project Description

half-court, two outdoor swimming pools, a Jacuzzi, a lawn, one permanent structure, and three temporary structures. The permanent structure is a 1,700-gsf, one-story pool service building with dressing rooms, lockers, showers, and laundry facilities. The temporary structures include two 65-gsf storage sheds and a 180-sq.-ft. shade structure next to the tennis courts. The southern part of the site is also comprised of two parcels. Assessor’s Block 201/Lot 12 is a roughly rectangular lot covering about 50,425 sq. ft., with five tennis courts, the private parking lot (6,000 sq. ft.) serving the athletic club, two permanent structures, and one temporary structure. One of the permanent structures is a one-story, 1,200-gsf clubhouse and pro shop with a half-story, temporary 1,200-gsf exercise room on the second floor. The other permanent structure is a one-story, 400-gsf office. Seawall Lot 351 covers about 27,937 sq. ft. (See Figure II-2: Existing Uses on the Project Site.)

APPLICABLE LAND USE CONTROLS

Golden Gateway Center Lots

The lots owned by the Golden Gateway Center are in a Residential/Commercial Combined: High Density (RC-4) use district and an 84-E height and bulk district. The Golden Gateway Center lots north of the Jackson Street alignment (Blocks 168 and 171) are also within the former Golden Gateway Redevelopment Project Area. The Embarcadero-Lower Market (Golden Gateway) Redevelopment Plan (as amended through November 20, 1995) has expired and is no longer applicable to the project site. The Redevelopment Plan was in effect for Block 171 through May 19, 2008, and through January 1, 2009, for Block 168.2

Seawall Lot 351

Like the Golden Gateway Center lots, Seawall Lot 351 is in an RC-4 use district and an 84-E height and bulk district. Seawall Lot 351 is also part of the Ferry Building Mixed Use Opportunity Area of the Port of San Francisco’s Waterfront Land Use Plan, which identifies the following acceptable land uses for Seawall Lot 351: open space, residential, assembly and

2 The original development agreement governing the Golden Gateway Center Lots required the developer to provide non-profit community facilities as part of the overall development within the Golden Gateway Center. In Section 4(a) of the Agreement for Disposition of Land for Private Development (“Agreement”) between Perini-San Francisco Associates (the “Developer”) and the Redevelopment Agency, dated August 27, 1962, the Developer agreed to maintain “community facilities of a permanent nature…designed primarily for use on a nonprofit basis” (page 25 of the Agreement). Subsequent to the Agreement, the Agency and Golden Gateway Center (the successor to the Developer) entered into a Second Supplement and Amendment to the Agreement (“Second Supplement”) on March 14, 1976. Section 1(d) of the Second Supplement deleted Section 4(a) of the Agreement (page 12 of the Second Supplement) and thereby removed the requirement to maintain community facilities on the property in exchange for the dedication of Sydney Walton Park for perpetual use as a public park.
FIGURE II-2: EXISTING USES ON THE PROJECT SITE

SOURCE: Turnstone Consulting
entertainment, general office, parking, retail (including restaurant), recreational enterprises, visitor services, and community facilities. Seawall Lot 351 is also subject to the common law public trust doctrine, as well as the terms and conditions of the Burton Act, which is the trust grant from the State to the City (sometimes referred to collectively as the “public trust”). The proposed residential use is not consistent with the public trust. In order to develop residential uses on Seawall Lot 351, the project sponsor would be required to obtain State Lands Commission approval to exchange a portion of Seawall Lot 351 for non-trust property pursuant to an exchange agreement authorized by the State Lands Commission, or to obtain authority by the California State Legislature to lift the public trust restrictions prohibiting housing on public trust lands from Seawall Lot 351.

SITE ACCESS

Access to the project site is provided by Washington Street, Drumm Street (which terminates at Jackson Street near the site boundary), and The Embarcadero. The project site is well-served by local and regional public transit. The San Francisco Municipal Railway (Muni) provides local transit service, operating several bus, trolley, and Muni Metro underground lines in the vicinity of the project site, including the 1-California, the 10-Townsend, and 41-Union bus lines, the F-Market & Wharves historic streetcar line, and several Muni Metro underground lines at the Embarcadero Station. The project site is also located within walking distance (approximately 1,000 feet) of the ferry terminals at the Ferry Building and the Embarcadero BART Station, both major regional transit connections.

ADJACENT USES

The project site is on the periphery of the Downtown Financial District. Uses adjacent to the project site include the high-density residential communities of Golden Gateway Center and Golden Gateway Commons; the public open spaces and other public uses on Assessor’s Blocks 202 and 203; and the offices, restaurants, retail uses, and open space at Piers 1, 1-1/2, 3, and 5. The high-rise Embarcadero Center office and commercial development is about a block (approximately 400 feet) to the south and southwest, the mixed-use Ferry Building is about a block (approximately 450 feet) to the southeast, and Pier 7 (with a restaurant and promenade) is about one-half block (approximately 200 feet) to the northeast.

B. PROJECT CHARACTERISTICS

PROJECT OVERVIEW

Under the proposed project, the existing Golden Gateway Tennis & Swim Club facility would be temporarily removed from the project site, and the site would be developed with two primarily residential buildings and new indoor and outdoor athletic club facilities. (See Figure II-3: Proposed Site Plan.) The proposed buildings would be built to Leadership in Energy and
Environmental Design (LEED) standards. The proposed buildings would encompass approximately 575,000 gsf of space and would range in height from 1 story (25 feet) to up to 12 stories (136 feet). The buildings would contain up to approximately 165 condominium residential units (46 one bedroom, 119 two or more bedrooms), and up to 420 underground parking spaces for residents and the public.

The proposed building space is listed below by type of use.

<table>
<thead>
<tr>
<th>Type of Use</th>
<th>Area (gsf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>290,500</td>
</tr>
<tr>
<td>Residential Parking</td>
<td>70,400</td>
</tr>
<tr>
<td>Public Parking</td>
<td>115,500</td>
</tr>
<tr>
<td>Retail</td>
<td>17,000</td>
</tr>
<tr>
<td>Restaurant/Bar</td>
<td>12,100</td>
</tr>
<tr>
<td>Fitness Center</td>
<td>12,800</td>
</tr>
<tr>
<td>Common Areas</td>
<td>25,000</td>
</tr>
<tr>
<td>Service and Core Space</td>
<td>31,700</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>575,000</strong></td>
</tr>
</tbody>
</table>

The Golden Gateway Tennis & Swim Club would operate the proposed fitness center in a new one-story building north of Jackson Street, as well as tennis courts and other outdoor recreational facilities on the northern part of the project site, as further described below. The project also would include private and common residential open space and publicly accessible open space, as further described below.

**PROPOSED BUILDINGS**

**Residential Buildings**

The proposed project includes two buildings in a roughly north-south orientation, one along The Embarcadero (four to six stories, 48-70 feet tall, referred to as the “east building”) and the other along Drumm Street (8-12 stories, 81-136 feet tall, referred to as the “west building”). These

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3 The project sponsor intends to design the proposed project with the goal of obtaining LEED Gold certification; the actual certification level achieved will be determined by the U.S. Green Building Council.

4 Building height in this EIR is measured under Planning Code Section 260(b). As such, the heights identified herein do not include such rooftop features as parapets, mechanical penthouses, and stair bulkheads. These features are not considered part of the building height, per Planning Code Section 260(b). However, they are taken into account in the analysis of aesthetic, shadow and wind impacts in this EIR.
buildings would be connected at the ground floor by a one-story central space along Washington Street, marking the main residential entrance to the buildings, and along a proposed new publicly accessible open space aligned with Jackson Street that would be constructed as part of the proposed project (the “Jackson Common,” discussed below). The buildings would be built generally along the Drumm Street, Washington Street, and The Embarcadero property lines, but would include alternating segments set back from the property lines to provide vertical articulation. A private central courtyard, accessible to residents, would be located in the ground-floor area between the two buildings. Setbacks would be incorporated into the east building at the fifth and sixth levels, and into the west building at the eighth, ninth, and penthouse levels. (For residential building elevations, see Figure II-4: Proposed Drumm Street Elevation, Residential Buildings; Figure II-5: Proposed Jackson Common Elevation, Residential Buildings; Figure II-6: Proposed The Embarcadero Elevation, Residential Buildings; and Figure II-7: Proposed Washington Street Elevation, Residential Buildings.)

The first level (ground floor) of the proposed residential buildings would contain a lobby and common areas, private residential amenities, retail spaces, and a restaurant. (See Figure II-8: Proposed Ground Floor Plan.) The retail spaces would range in size from about 950 gsf to about 8,400 gsf. The types of uses that might occupy the retail spaces include convenience retail, a day spa, a newsstand, and a wine shop. Alternatively, one of the smaller retail spaces could be used for a building management office. A proposed restaurant (approximately 8,000 sq. ft.) would occupy the southern portion of the east building at the ground floor and would front on The Embarcadero and Washington Street. The entrance to the restaurant would be at the chamfered southeast corner of the ground floor. Outdoor seating areas would be provided within covered patios along The Embarcadero and Washington Streets.

A trash area and loading dock area along Drumm Street would serve the buildings. The loading dock would include three spaces for commercial vehicles, plus an adjacent facility where residential and commercial trash would be handled and held for pick-up. Trucks would access the loading dock through a rolling gate and driveway directly off of Drumm Street. The ground floor would also include space for access to the garage and ramps leading to and from the proposed underground parking (discussed later in this section).

The second through sixth floors in the east building and the second through twelfth floors in the west building would contain residences and core space. (See Appendix B for plans of the second through twelfth floors.)
The project sponsor proposes to install a “green roof” to help the project obtain LEED credits for stormwater management and heat island reduction. A green roof is a vegetated surface that captures rainwater and returns part of it back to the atmosphere through evaporation. The sponsor anticipates that the proposed green roof would be an active garden area with raised hardscape paths, accessible to residents of the penthouse units (eighth-floor units with private, secured elevator access).

**Athletic Club Building**

The proposed indoor fitness center would be located in a new one-story (35-foot-tall) building north of Jackson Street. The roughly triangular building would be adjacent to The Embarcadero. The approximately 12,800-sq.-ft. building would include a café (approximately 1,850 sq. ft.) that would occupy the southeast corner of the proposed building fronting on The Embarcadero and on the proposed Jackson Common (described below). The fitness center roof level would include a changing room and stair and elevator bulkhead, an outdoor lap pool, a recreation pool, a spa area, and deck seating, all enclosed with a railing (fitness center facilities are further described below). Building façades would be articulated on all elevations by windows of varying sizes and angled roof surfaces. (See Figure II-9: Proposed The Embarcadero Elevation, Golden Gateway Tennis and Swim Club.)

**Park Restaurant Building**

An approximately 4,100-sq.-ft., one-story, 15-foot-tall restaurant building would be constructed immediately to the north of the proposed Golden Gateway Tennis & Swim Club building and its tennis courts. The restaurant building would front along the southern end of a new publicly accessible open space proposed for the northern end of the project site (the “Pacific Avenue Park”). The building would be a transparent pavilion that is intended to activate the proposed publicly accessible open space.

**PROPOSED PARKING**

Parking for residents and the public would be provided on three levels below the proposed residential buildings. (See Figure II-10: Proposed Parking Level A; see Appendix B for figures showing Parking Levels B and C.)

The parking below the buildings would occupy approximately 185,900 gsf. The lowest level of parking (Level C beneath the buildings) would be about 31 feet below grade. (See Appendix B for building sections.) The proposed parking would include up to approximately 420 spaces, with approximately 165 spaces for residents and 255 public spaces for retail, restaurant, and health club uses and the public, including 90 spaces required to serve the Ferry Building waterfront area.
FIGURE II-9: PROPOSED THE EMBARCADERO ELEVATION,
GOLDEN GATEWAY TENNIS AND SWIM CLUB

SOURCE: SOM
under the Port of San Francisco’s Request for Proposals. All public spaces would be available with no access restrictions. The proposed vehicle parking would replace the existing 17 surface spaces used for the athletic club and 105 surface spaces on Seawall Lot 351 that serve the Ferry Building, resulting in a net increase of 133 publicly available parking spaces. Public access to the public parking garage would be through an elevator entrance along Washington Street entered to the east of the residential lobby and an elevator entrance along Jackson Common. Elevators would connect the private residential underground parking to the ground and upper floors of the proposed buildings. Vehicle access to the parking below the buildings would be through a two-way ramp directly off of Washington Street west of the lobby entrance.

PROPOSED ATHLETIC CLUB FACILITIES

The project sponsor proposes to construct four regulation-size tennis courts on the northern part of the project site, Assessor’s Block 171/Lot 69, to partially replace the nine existing tennis courts that would be removed for construction of the project. Two outdoor swimming pools (a 49-by-75-foot lap pool, and a 30-by-46-foot recreation pool, a Jacuzzi spa, and outdoor deck seating would be constructed on the roof of the proposed fitness center building. These would replace the two existing in-ground pools (25 feet by 55 feet, and 36 feet by 75 feet) with larger pools (30 feet by 46 feet, and 49 feet by 75 feet). The tennis courts would occupy about 27,000 sq. ft., and the pools and related rooftop outdoor space for the athletic club would occupy about 13,000 sq. ft. The Western Athletic Clubs would continue to control and operate the proposed new athletic club facilities. Besides being used for general membership activities, the club would also continue to be used for children’s summer camps with priority for dues-paying club members, but with additional space allocated to the general public. This is the club’s current operating policy, and camp activity levels are anticipated to be similar with the proposed project.5

The existing tennis courts and pools would be closed at the outset of project construction. Project construction, including demolition, site and foundation work, construction of the parking garage, and construction of buildings, is estimated to take 27 to 29 months. The existing indoor fitness center at the Golden Gateway Center across Drumm Street would continue to operate during the construction period. The existing tennis courts, pools, and basketball court on the project site would be closed at the outset of project construction. The current schedule calls for the proposed new athletic club building, tennis courts, and swimming pools to be completed and available for use within 24 months of commencement of construction. The existing indoor fitness center

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would move into the proposed 12,800-gsf fitness center building upon completion, and the space now occupied by the existing facility would be converted into a storage and garage area for Golden Gateway maintenance staff.

PROPOSED OPEN SPACE AND LANDSCAPING AND SIDEWALKS

Residential Open Space

According to Planning Code Section 135, the residential open space requirements for the proposed project would be 36 sq. ft. of private open space per residential unit, with a ratio of 1.33 of common usable open space (48 sq. ft.) for each residential unit that may be substituted for private open space. These requirements would translate into 5,940 sq. ft. of private open space (165 units multiplied by 36 square feet per unit) or about 7,900 sq. ft. if all open space were common for the use of all residents (5,940 square feet multiplied by 1.33).

Proposed open spaces would include private open space for the residents, common open space for the residents, and space accessible to the public. The project would include approximately 14,900 sq. ft. of private open space, in the form of decks, terraces, and rooftop space for individual residential units. Proposed common open space for the residents would total approximately 8,700 sq. ft. The proposed open space would exceed the open space requirements of the Planning Code.

Publicly Accessible Open Space

Shared open space that would be open to the public would include an approximately 9,500-sq.-ft. corridor north of the proposed buildings (“Jackson Common”). The proposed Jackson Common would align with the Jackson Street right-of-way and is intended to enhance pedestrian connectivity and enhance views toward the waterfront along Jackson Street. Jackson Common would include a plaza and landscaping. Other publicly accessible open space would include an approximately 11,500 -sq.-ft. “Pacific Avenue Park” with a plaza and landscaping at the north end of the project site, and a 2,800-sq.-ft. strip that would effectively widen the existing Drumm Street pedestrian walk from Jackson Street north to The Embarcadero. Jackson Common, Pacific Avenue Park, and the widening of the Drumm Street pedestrian walk are shown on Figure II-3 on p. II.6.

Landscaping

As part of the proposed project, 50 existing street trees on the adjacent Drumm and Washington Street and Embarcadero sidewalks would be removed. The proposed project includes street tree replanting in at least a 1:1 ratio in conformity with San Francisco Public Works Code requirements. New street tree planting would also conform to the requirements for new
II. Project Description

construction under Planning Code Section 143, which requires new construction to include a 24-inch box tree every 20 feet along the project property street frontage. In addition, the 86 existing trees within the project site would be removed. Of these, 36 are significant trees subject to the Public Works Code, and per the code, would be expected to be replaced. A landscaping design scheme would be developed for the proposed publicly accessible open spaces (Jackson Common, Pacific Avenue Park, and widened Drumm Street pedestrian walk) and the common courtyard area between the residential buildings (accessible to residents of the proposed project), which would include the planting of new trees, avoidance of invasive species and use of local and drought-tolerant plants.

Proposed landscaping would also be intended to fulfill LEED prerequisites and credit requirements related to stormwater management. The project site is within a combined sewer area and would trigger compliance with the City’s stormwater management ordinance (Public Works Code Section 147 et seq.) and Stormwater Design Guidelines (SDG) as provided by the ordinance. As per the requirements of the SDG, the proposed project must achieve LEED Sustainable Sites (SS) c6.1, “Stormwater Design: Quantity Control.” The proposed project must implement a stormwater management approach that reduces existing stormwater runoff flow rate and volume by 25 percent for a two-year 24-hour design storm. The proposed project would minimize disruption of natural hydrology by implementing low impact design approaches such as reduced impervious cover, reuse of stormwater, or increased infiltration. As a result, the project would retain runoff on site, promote stormwater reuse, and limit discharge into the combined sewer collection system. These project design features would limit the incremental demand on both the collection system and wastewater facilities resulting from stormwater discharges, minimizing the potential need for upsizing or constructing new facilities.

Sidewalks

The existing landscaped median on Washington Street between The Embarcadero and Drumm Street would be eliminated as part of the proposed project in order to widen the sidewalk on the north side of Washington Street from the existing 10 feet to approximately 20 feet. This would provide additional pedestrian space in front of the proposed building. At the corner of Washington Street and The Embarcadero the sidewalk would be widened to 28 feet to form a bulb-out defining a vehicle drop-off area for the proposed project’s residential lobby and for the restaurant. The proposed project also includes a widened sidewalk on the east side of Drumm Street from the existing 10 feet to approximately 18 feet, to provide additional pedestrian space.

PROJECT CONSTRUCTION

Project construction, including demolition, site and foundation work, construction of the parking garage, and construction of the buildings, would take 27 to 29 months. Assuming that
construction would begin in 2012, the buildings would be ready for occupancy in 2014. The first phase of construction would take about 16 months and would include demolition (2 months), excavation and shoring (7 months), and foundation and below-grade construction work (7 months).

The proposed buildings would have a pile foundation system supporting a thick mat. The estimated depth of proposed excavation would be as much as 38 feet below the ground at the site of the proposed residential buildings (with excavation of as much as about 40 feet deep for elevator pits), and 2 feet to 4 feet beneath the tennis courts and proposed athletic club building north of Jackson Street. Pile driving would be required; pile lengths would average about 130 feet. Approximately 110,000 cubic yards of soil would be removed from the project site.

C. OBJECTIVES OF THE PROPOSED PROJECT

PROJECT SPONSOR

The project sponsor seeks to achieve the following objectives by undertaking the 8 Washington/Seawall Lot 351 project:

- To develop a high-quality, sustainable, and economically feasible high-density, primarily residential, project within the existing density designation for the site, in order to help meet projected City housing needs and satisfy the City’s inclusionary affordable housing requirements;

- To create new pedestrian, public access and circulation improvements and street-level retail and/or restaurant uses that will reconnect the City with the waterfront and enhance and beautify the Ferry Building waterfront area and the Golden Gateway area;

- To develop a project that achieves high-quality urban design and LEED Gold or equivalent sustainability standards and that enhances the existing urban design character of the area;

- To increase the supply of public underground parking to support the continued economic viability of the Ferry Building Farmer’s Market and the retail and restaurant uses at the Ferry Building, Pier 1 and Piers 1-1/2 - 5;

- To complete the project on schedule and within budget;

- To construct a high-quality project that includes a sufficient number of residential units to produce a reasonable return on investment for the project sponsor and its investors and is able to attract investment capital and construction financing, while generating sufficient revenue to finance the recreation, parking, and open space amenities proposed as part of the project;

- To develop a project with minimal environmental disruption; and

- To construct recreation and open space that serves Golden Gateway residents, San Franciscans and waterfront visitors alike.
PORT OF SAN FRANCISCO

The Port’s objectives for the development of Seawall Lot 351 are articulated in its Request for Proposals for Seawall Lot 351 as follows:6

**Design Objectives**

- The design of new development should respect the character of the Ferry Building, The Embarcadero Roadway, the mid-Embarcadero open space improvements (Harry Bridges Plaza and Sue Bierman Park), and the Golden Gateway project.
- Construct new development which complements the rich architectural character of the Embarcadero National Register Historic District and is complementary to the architectural features of the pier bulkhead buildings.
- Reinforce the large scale (grand boulevard) of The Embarcadero by using bold forms, deeply recessed building openings, and strong detailing on building façades facing The Embarcadero.
- Consider emphasis on the corner of Washington and The Embarcadero in a manner that strengthens or enhances the Mid-Embarcadero open spaces and pedestrian experience.
- To define the north edge of adjacent open space, new development should acknowledge the massing and street enclosure relationship with the bulkhead buildings across The Embarcadero (e.g., bold forms of similar height, constructed to The Embarcadero edge).
- Maintain and enhance the view corridors along The Embarcadero and down Washington Street. Recognize the visual connection from the Ferry Building and Pier 1 to Coit Tower in a manner that preserves the iconic vista and acknowledges the landmark status of these sites.
- Propose a building height and massing that fits within the neighborhood context formed by the William Heath Davis Building of the Golden Gateway Center, the Golden Gateway Commons condominiums and the heights of the historic Pier 1 through Pier 5 bulkhead buildings.
- Preserve open views and pedestrian access through landscaped improvements or waterfront-serving activity that does not require a permanent structure (e.g., outdoor café, flower market, bike shop) along the sewer easement in the SWL 351 portion of the Jackson Street right-of-way.
- Proposed design should consider the appearance of all rooftop equipment as seen from the street and the elevation of neighboring buildings and hills. Consider active roofs, with careful placement of elevator towers that provide access to the roof.
- Primary uses and pedestrian entrances should face The Embarcadero, and incorporate lighting and other amenities to create enlivened street activity.
- Avoid blank ground floor walls along The Embarcadero and Washington Street by providing views into the ground floor of buildings.

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II. Project Description

- Avoid service and parking access from The Embarcadero.
- Design and locate parking facilities to minimize their aesthetic presence and impact on the surrounding area.
- Utilize best efforts to meet or exceed the City’s Green Building Standards and best sustainability practices.
- Comply with Regional Water Quality Control Board performance criteria and the Port’s Storm Water Management Plan for the reduction of stormwater pollution impacts associated with newly constructed facilities.

Development Program Objectives

- Promote public enjoyment of and access to the waterfront by providing a destination that welcomes diverse users, including workers, San Francisco residents, and visitors to the waterfront and the adjacent public open spaces including Sue Bierman Park and Justin Herman Plaza.
- Encourage pedestrian flow from the Ferry Building, Pier 1, and Sue Bierman Park to the site and to the greater waterfront through project design, onsite public open spaces, location of parking, and appropriate uses.
- Activate and revitalize the waterfront edge during the evenings and weekends to complement the weekday office uses in the adjacent downtown buildings.
- Create an enlivened pedestrian experience along The Embarcadero and Washington Street by considering multiple uses and storefronts on the ground floor and well located public open space on the site.
- Reconnect the downtown and landside neighborhoods with the waterfront and make the area inviting to workers and local residents as well as visitors.
- Provide a development program which includes no fewer than 90 parking spaces for visitors to the Ferry Building waterfront area. Operate parking in a manner to optimize utilization and minimize impact on traffic and the neighborhood.
- Realize Port revenue to support the Port’s public trust responsibilities, which include maintaining maritime industries, creating public-oriented activities and open space waterfront improvements, preserving historic maritime resources, and maintaining Port facilities.

D. REQUIRED APPROVALS

The proposed project is subject to review and approval by agencies with appropriate jurisdiction, including various City agencies and commissions. In order for the project to proceed, the following discretionary approvals would be required:

Planning Commission

- Certification of this EIR;
- Review and approval of a Planned Unit Development/Conditional Use Permit pursuant to Planning Code Sections 303 (Conditional Use), 304 (PUD), 253 (review
of structures over 40 feet in any “R” District), 271(b) (Bulk Limit Exception), 151 and 204.5(c) (off-street parking for residential uses in excess of maximum accessory amounts), 151 (reduction in off-street parking requirements for non-residential uses), 209.7(d) (provision of a public parking garage for spaces to serve the Ferry Building), 209.8(c) (commercial use above ground floor for the health club), 209.8(f) (non-residential use exceeding 6,000 gross square feet), 134 (rear yard requirement). Alternatively, Planning Code amendments pursuant to Planning Code Section 302, to create a Special Use District (SUD) under Planning Code Section 235, consistent with the bulk, parking, rear yard, dwelling unit exposure, commercial uses, and height of the proposed project, with separate Conditional Use authorization under Section 253;

- Approval of General Plan and Zoning Map amendments to allow an increase in height on a portion of the site to 136 feet and to allow the bulk of the proposed project (and, if a SUD is sought, amendment of the Zoning Map to show the SUD);
- A determination by the Planning Commission of consistency with the General Plan pursuant to Charter Section 4.105 and Administrative Code Section 2A.53;
- Joint adoption by the Planning Commission and the Recreation and Park Commission of a resolution establishing a new absolute cumulative limit for allowable new shadow on Sue Bierman Park to accommodate the new shadow on that park that would result from the proposed project (no cumulative limit currently exists for Sue Bierman Park); and
- Shadow impact determination by the Planning Commission, after review and comment by the San Francisco Recreation and Park Department and Commission under Section 295 of the Planning Code.

**Port Commission**

- Approval of a purchase and sale agreement to convey a portion of Seawall Lot 351 to the project sponsor for residential development after implementation of the public trust exchange;
- Approval of a lease disposition and development agreement, ground lease, and related transactional documents governing development and operation of improvements by the project sponsor on portions of Seawall Lot 351 retained by the Port;
- Approval of a Public Trust Exchange Agreement to effect removal of the public trust use limitations from the portion of Seawall Lot 351 proposed for residential use and imposition of public trust use limitations on the portions of the 8 Washington site proposed for open space and restaurant use; and
- Approvals to form a Mello-Roos Community Facilities District (CFD), maintenance CFD, and Infrastructure Financing District (IFD) to finance construction and maintenance of public facilities serving the site.

**San Francisco Recreation and Park Commission**

- Joint adoption by the Planning Commission and the Recreation and Park Commission of a resolution establishing a new absolute cumulative limit for allowable new shadow on Sue Bierman Park to accommodate the new shadow on that park that
would result from the proposed project (no cumulative limit currently exists for Sue Bierman Park); and

- Review and comment under Section 295 of the Planning Code.

**San Francisco Department of Public Works**

- Approval of a Tentative Subdivision Map;
- Approval by the San Francisco Department of Public Works of the proposed removal of street trees and “significant trees”; and
- Approval by the San Francisco Department of Public Works of a proposed curb cut along Washington Street, expanded sidewalks on Washington Street and Drumm Street, and lane reconfiguration on Washington Street to remove landscape median.

**Board of Supervisors**

- If a SUD is sought in lieu of a Conditional Use/PUD, approval of an amendment to the Planning Code to create a SUD for the project site to allow the proposed height, bulk, parking, commercial uses, rear yard and dwelling unit exposure of the proposed project;
- Approval of General Plan and Zoning Map amendments to allow an increase in height on a portion of the site to 136 feet and to allow the bulk of the proposed project (and, if a SUD is sought, amendment of the Zoning Map to show the SUD);
- Approval of a purchase and sale agreement to convey a portion of Seawall Lot 351 to the project sponsor for residential development after implementation of the public trust exchange;
- Approval of a lease disposition and development agreement, ground lease, and related transactional documents governing development and operation of improvements by the project sponsor on portions of Seawall Lot 351 retained by the Port;
- Approval of a Public Trust Exchange Agreement to effect removal of the public trust use limitations from the portion of Seawall Lot 351 proposed for residential use and imposition of public trust use limitations on the portions of the 8 Washington site proposed for open space and restaurant use; and
- Approvals to form a Mello-Roos Community Facilities District (CFD), maintenance CFD, and Infrastructure Financing District (IFD) to finance construction and maintenance of public facilities serving the site.

**State Lands Commission**

- Approval of a Public Trust Exchange Agreement to effect removal of the public trust use limitations from the portion of Seawall Lot 351 proposed for residential use and imposition of public trust use limitations on the portions of the 8 Washington site proposed for open space and restaurant use.

**San Francisco Public Utilities Commission / Port**

- Approval from the SFPUC for discharging into the combined sewer system as a result of dewatering the site.
II. Project Description

San Francisco Department of Health

• Approval of a site mitigation plan by the San Francisco Department of Health under San Francisco’s Maher Ordinance (Article 22A of the San Francisco Health Code); and

• Approval of a dust control plan by the San Francisco Department of Health under Article 22B of the San Francisco Health Code.
III. PLANS AND POLICIES

In accordance with CEQA Guidelines Section 15125(d), this chapter discusses potential conflicts with applicable local and State plans and policies. Policy conflicts do not, in themselves, indicate a significant environmental effect within the meaning of CEQA. To the extent that physical environmental impacts may result from such conflicts, such impacts are analyzed in this EIR in the specific topical sections.

A. CITY PLANS AND POLICIES

SAN FRANCISCO GENERAL PLAN

The San Francisco General Plan is the embodiment of the City’s vision for the future of San Francisco. It is comprised of a series of 10 elements, each of which deals with a particular topic: Air Quality, Arts, Commerce and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design. The General Plan also contains 10 area plans that identify specific localized goals and objectives for neighborhoods or districts of the City.

The General Plan provides general policies and objectives to guide land-use decisions and contains some policies that relate to physical environmental issues. The Planning Department, the Planning Commission, the Board of Supervisors, and other City decision-makers will evaluate the proposed project in accordance with applicable provisions of the General Plan, and will consider potential conflicts as part of the decision-making process. This consideration of General Plan objectives and policies is carried out independent of the environmental review process, as part of the decision to approve, modify, or disapprove a proposed project. Potential conflicts with provisions of the General Plan that would cause physical environmental impacts have been evaluated as part of the impacts analysis carried out for relevant, specific topics in this EIR. Potential conflicts with General Plan objectives and policies not identified in the EIR could be considered in the project evaluation process and would not alter the physical environmental effects of the proposed project. The project would be reviewed by the Planning Commission in the context of all applicable objectives and policies of the General Plan.

SAN FRANCISCO PLANNING CODE

The San Francisco Planning Code, which incorporates the City's Zoning Maps, implements the San Francisco General Plan and governs permitted uses, densities, and configuration of buildings within the City. Permits to construct new buildings or to alter or demolish existing ones may not
be issued unless the proposed project conforms to the Code, an allowable exception is granted pursuant to provisions of the Code, or amendments to the Code are included as part of the project.

**Existing Zoning Districts**

Figure III-1: Existing Use Districts, shows the existing use districts for the project site and vicinity. The project site is in the RC-4 (Residential/Commercial Combined: High Density) use district. The RC-4 use district provides for a mixture of high-density dwellings (at a ratio of 1 dwelling unit for each 200 sq. ft. of lot area) and supporting commercial uses. While residential, retail, restaurant, and private athletic club uses are permitted in the RC-4 District, the proposed project would require Conditional Use authorization or a Planning Code amendment to create a Special Use District to permit the size of the proposed retail, restaurant, and athletic club uses (non-residential uses in excess of 6,000 sq. ft. require Conditional Use authorization in the RC-4 District) and to permit the second floor use of the health club facility (commercial uses above the ground floor require Conditional Use authorization in the RC-4 District).

**Existing Height and Bulk Districts**

Height and bulk districts express the building height limit (e.g., 84 feet in a 84-E height and bulk district) and the bulk limitations (e.g., the “E” symbol limits the maximum plan dimensions above a certain height, in this case, to 110 feet in length and 140 feet along the diagonal, above 65 feet high). The bulk limits are listed in Planning Code Section 270.

Figure III-2: Existing Height and Bulk Districts, shows the existing height and bulk districts for the project site and vicinity. The entire project site is in an 84-E height and bulk district. The land on either side of The Embarcadero on the north side of Pacific Avenue is in a 40-X height and bulk district. To the west, Golden Gateway Center and Golden Gateway Commons are within the 275-E height and bulk district. Two blocks to the southwest and south, One Maritime Plaza and One through Three Embarcadero Center are within the 300-S district, and Four Embarcadero Center and the Hyatt Regency are within the 200-S district. The parks and open spaces south and southeast of the project site are designated OS. To the southeast and east, Pier 5 is within the 65-D-1 district, Piers 1, 1-1/2 and 3 are within the 84-X-1 district, and the Ferry Building is within the 84-J district.

The proposed east building would be up to 70 feet tall, which is within the existing height limit. The proposed west building would be up to 136 feet tall, exceeding the existing height limit. The proposed west building will therefore require an amendment to the Planning Code to increase the height limit of the portion of the project site that would be occupied by the building.
FIGURE III-2: EXISTING HEIGHT AND BULK DISTRICTS

Source: San Francisco Planning Department, Turnstone Consulting

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The project would require Conditional Use authorization under Planning Code Section 253 because both buildings would exceed 40 feet in height in an R district. In addition, the project would require a bulk exception under Planning Code Section 271, which also requires Conditional Use authorization, because the west building would exceed the bulk limits at and above a height of 65 feet. The proposed west building would have a maximum length of approximately 240 feet, exceeding the bulk limit by 130 feet, and a maximum diagonal plan dimension of approximately 250 feet, exceeding the bulk limit by 110 feet. In lieu of a bulk exception, the project may request that the Planning Commission recommend and the Board of Supervisors adopt an amendment to the Planning Code to create a Special Use District setting forth specific bulk requirements for the project site consistent with the project design.

PRIORITY PLANNING POLICIES

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the Planning Code to establish eight Priority Policies. These policies are (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character; (3) preservation and enhancement of affordable housing; (4) discouragement of commuter automobiles; (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; (6) maximization of earthquake preparedness; (7) landmark and historic building preservation; and (8) protection of open space. The case report and approval motions for the proposed project will contain the San Francisco Planning Department’s comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

Prior to issuing a permit for any project that requires an Initial Study CEQA, and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the General Plan, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The Planning Commission review of the project for consistency with the Priority Policies will take place during its final review of the required project approvals outlined in “Project Approvals” in Chapter II, Project Description, of this EIR. The case report and approval motions for the project will contain the Department’s comprehensive project analysis and findings regarding consistency of the proposed project with the Priority Policies.

TRANSIT FIRST POLICY

In 1998, the San Francisco voters amended the City Charter to include a Transit First Policy. The Transit First Policy is a set of principles that underscore the City’s commitment that travel by transit, bicycle, and on foot be given priority over the private automobile. These principles are
III. Plans and Policies

embodied in the policies and objectives of the Transportation Element of the General Plan. All City boards, commissions, and departments are required, by law, to implement Transit First principles in conducting the City’s affairs.

The City’s Transit First Policy provides that “parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation” (City Charter, Section 8A.115). As discussed in EIR Section IV.D, Transportation, the proposed project would exceed Planning Code allowances for accessory parking, requiring Conditional Use authorization or adoption of a Special Use District to allow for the proposed parking ratio. Provision of parking in excess of required and accessory amounts could encourage additional residents and users of the proposed project to choose driving over other forms of travel.

The proposed project would provide a total of 420 parking spaces (165 spaces for project residents and 255 spaces for the retail uses and the general public, including 90 spaces required to serve the Ferry Building waterfront area under the Port of San Francisco’s Request for Proposals). These 420 parking spaces would meet the midday project parking demand of 298 spaces,\(^1\) as well as replace and relocate the existing surface spaces on the project site that would be removed as part of the proposed project (17 existing spaces for the Golden Gateway Tennis and Swim Club and 105 existing spaces on Seawall Lot 351. \(298+17+105=420\)). Thus, proposed project would not contribute to a net reduction of available parking spaces in the area that could encourage more project residents, project visitors, and visitors to the area, to choose alternative forms of transportation over driving.

Other aspects of the proposed project are consistent with the Transit First Policy. The proposed project would place 165 new residential units and other uses at the edge of the downtown financial district within convenient walking distance to and from places of employment, public transit, services, and attractions. In addition, the proposed project would include improvements to the bicycle circulation system and the pedestrian realm around and through the project site to encourage walking, transit use, and bicycling.

The Planning Department, the Planning Commission, the Board of Supervisors, and other City decision-makers will evaluate the proposed project in accordance with provisions of the Transit First Policy, and will consider whether the proposed project would, on balance, conform or conflict with the Transit First Policy. This consideration is carried out independent of the

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\(^1\) Adavant Consulting, 8 Washington St./SWL 351 Transportation Study, May 25, 2011. A copy of this report is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.
environmental review process, as part of the decision to approve, modify, or disapprove a proposed project.

PORT OF SAN FRANCISCO WATERFRONT LAND USE PLAN

Seawall Lot 351 is within the Ferry Building Waterfront Subarea of the Port of San Francisco Waterfront Land Use Plan. This area extends from Pier 5 to the Agriculture Building and includes Piers 1/2, 1, 1-1/2, and 3, the Ferry Building, and Ferry Plaza. Land uses identified as acceptable on Seawall Lot 351 include residential, open space, parking, retail, and recreational (among others). The Waterfront Design & Access Element is a component of the Waterfront Land Use Plan, and is intended to guide the physical form of waterfront revitalization. The element provides policy for the preservation and development of public access and open space, views, and historic resources, as well as architectural design criteria that will be applied to new development.

The design criteria provide the following direction for the massing of new development on Seawall Lot 351: “Massing: To define the north edge of adjacent open space, new development should acknowledge the massing and street enclosure relationship with the bulkhead buildings across The Embarcadero (e.g., bold forms of similar height, constructed to the Embarcadero edge.) (emphasis added).”2 The horizontal mass of the Pier 1 bulkhead building is about 37 feet tall, and its pedimented central segment is about 55 feet tall. The proposed east building would measure between 48 and 70 feet tall along the west side of The Embarcadero. As such, the proposed east building would not be similar in height to the Pier 1 bulkhead building. At a height of 35 feet, the proposed health club building would be similar in height to, but shorter than, the Pier 1 bulkhead building.

The proposed project could also potentially conflict with aspects of the Waterfront Design & Access Element’s design criteria for the orientation of new development on Seawall Lot 351. The design criteria provide the following direction for building orientation on Seawall Lot 351: “Orientation: Primary Uses and pedestrian entrances should face The Embarcadero.” The proposed project would have its primary residential entrance lobby along Washington Street at the midpoint of the block. The east building would provide a secondary residential entrance along The Embarcadero. The east building would also provide for ground-floor restaurant and retail space along its entire length on The Embarcadero, intended to maintain an active street presence along The Embarcadero. The entrance to the Golden Gateway Tennis & Swim Club would also be from The Embarcadero (or from the proposed Jackson Common just off of The Embarcadero).

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The element contains certain policies that relate to environmental impacts on aesthetics. A discussion of the intent of the project to conform with the Waterfront Design & Access Element is found in Section IV.B, Aesthetics, of the EIR.

Northeast Embarcadero Study

The Introduction to this EIR discusses the background and intent of the Northeast Embarcadero Study on p. Intro.1. On July 8, 2010, the Planning Commission approved a resolution urging the Port and other City departments to consider the work of the Planning staff set forth in the Northeast Embarcadero Study in future deliberations. Since the Planning Commission issued its recommendation, neither the Port nor the City and County of San Francisco has adopted the Northeast Embarcadero Study as a planning policy document. Therefore, the Northeast Embarcadero Study represents a planning study with no legally binding effect on land use planning decisions made by the Port, Planning Commission, or any other public agency. For informational purposes, this EIR provides a discussion of the Planning staff recommendations contained in the Northeast Embarcadero Study. The EIR also identifies differences between the vision contained in the Northeast Embarcadero Study and the development plan contemplated by the proposed project.

For the portion of the project site south of the Jackson Street alignment, the Northeast Embarcadero Study recommends the following:

New development should be sculpted to provide a flexible range of heights and massing. The preferred urban form for the portion of this site fronting Washington Street, The Embarcadero and the south edge of the extended Jackson Street would be 6 stories (67 to 70 feet in height, depending on ground-floor height). The Planning Department remains convinced that markedly lower development on any significant portion of this site, especially where it fronts The Embarcadero or Washington Street, would be visually inconsistent with the scale and civic prominence of The Embarcadero and the scale of buildings in the immediately adjacent downtown.

The portion of the site that fronts Drumm Street should also be sculpted. In general, it should be allowed to rise to 8 stories (87-90 feet in height, depending on ground-floor height). Further, in light of this study’s recommendation to apply a six-story height maximum over more of the site south of Jackson Street, and to partially compensate for the resultant reduction in the housing that can now be achieved, while continuing to ensure the sculpted heights desired by the community, approximately one-third of this portion of the site should be allowed to rise to a maximum of 12 stories (125-130 feet, depending on ground-floor height). The location of this great height is most appropriate at the southern corner of the site, where Drumm and Washington Streets meet.

The goal of these height recommendations is to respond to the community’s desire for attractive buildings that offer a more varied and compelling urban form than would otherwise be possible under uniform maximum height limits. The
community has also asked that greater flexibility be built into the height
guidelines to allow for design flexibility to respond to site constraints and
community needs.\textsuperscript{3}

For the portion of the project site north of the Jackson Street alignment, the *Northeast Embarcadero Study* recommends that “new development here should be no higher than 2 stories (25 feet in height).”

Development under these recommendations would be a block perimeter, central courtyard configuration on the portion of the project site south of the Jackson Street alignment. The eastern two-thirds of this southern portion of the project site would be up to 6 stories along The Embarcadero (up to 70 feet tall). Greater height is recommended for the western one-third of this portion of the project site along Drumm Street: 12 stories (up to 130 feet) at the southwest corner of the project site; and 8 stories (up to 90 feet) to the north, comprising the remaining two-thirds of the Drumm Street frontage.

The design of the proposed project responds to, but does not implement as a whole, the recommendations in the *Northeast Embarcadero Study*. The proposed design calls for two residential buildings: an east building along The Embarcadero (4-6 stories, 48-70 feet tall), and a west building along Drumm Street (8-12 stories, 81-136 feet tall) instead of the block perimeter central courtyard configuration recommended by Planning staff in the *Northeast Embarcadero Study* for the portion of the project site south of the Jackson Street alignment.

The proposed east building would conform to Planning staff recommendations for height along The Embarcadero. At the southern one-third segment of the Drumm Street frontage, the proposed west building would conform to the 12-story height recommendation, but the southern segment of the west building would exceed the recommended height dimension by up to 6 feet. At its middle one-third segment, the proposed west building would exceed the recommended height by up to 4 stories (46 feet). At its northern one-third segment, the proposed west building would generally conform to the height recommendations contained in the *Northeast Embarcadero Study*.

The proposed athletic club building north of the Jackson Street alignment would conform to the *Northeast Embarcadero Study*’s two-story height recommendation for this portion of the project site, but requires an additional 10 feet in height to accommodate the proposed outdoor rooftop swimming pools. As such, the rooftop changing rooms and elevator bulkhead would rise to up to 35 feet tall, exceeding the *Northeast Embarcadero Study*’s maximum height recommendation for this portion of the project site by 10 feet.

\textsuperscript{3} *Northeast Embarcadero Study*, pp. 51-52.
III. Plans and Policies

B. STATE PLANS AND POLICIES

TIDELANDS TRUST AND STATE LANDS COMMISSION

Seawall Lot 351 is subject to the common law public trust doctrine, as well as the terms and conditions of the Burton Act, which is the trust grant from the State to the City (sometimes referred to collectively as the “public trust”). The public trust doctrine as developed in California limits uses of trust lands to those that are water-dependent or water-related, including commerce, fisheries, navigation, environmental preservation, and recreation. Ancillary or incidental uses that directly promote trust uses, are directly supportive and necessary for trust uses, enhance natural resources, or that accommodate the public’s enjoyment of trust lands are also permitted, such as hotels, restaurants, shops, and parking areas. Non-water-oriented private uses such as general office and residential uses are not considered public trust uses. The public trust use limitations are also incorporated into the Burton Act. The Burton Act is the legislative grant that authorized the transfer of San Francisco’s submerged and filled tidelands from the State to the City, and sets forth the terms under which the property is to be held in trust by the San Francisco Port Commission.

The Waterfront Land Use Plan allows for certain non-trust uses on seawall lots, including residential use on Seawall Lot 351, if the Port determines the lots are surplus to the trust and public trust land use restrictions are removed. The removal of the trust can be accomplished by an exchange for other non-trust property of equivalent value, or a State legislative action. If an exchange were used, the Port would enter into an exchange with the State Lands Commission and the project sponsor that provides for conveyance of Seawall Lot 351 to the developer and an alternative trust parcel to the City (to be held by the Port subject to the public trust). This process would require approvals by the Port Commission, San Francisco Board of Supervisors, and State Lands Commission. The State Lands Commission is authorized to approve a public trust exchange to lift the public trust pursuant to Chapter 310, Stats. 1987 upon the following findings:

- The lands to be acquired have a value equal to or greater than the value of the lands for which they are to be exchanged;
- SWL 351 has been filled and reclaimed;
- SWL 351 is cut off from access to the waters of San Francisco Bay;
- SWL 351 constitutes a relatively small portion of the lands granted to the City and County;

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4 Chapter 1333, Statutes of 1968.
The portion of SWL 351 to be exchanged is no longer needed or required for the promotion of the public trust for commerce, navigation and fisheries or the statutory trust; and

No substantial interference with the trust uses and purposes will ensue by virtue of the exchange.

Such an exchange would be considered consistent with applicable public trust principles.

The project sponsor proposes to exchange privately held property within the project site that is not currently subject to the public trust (portions of Block 168 and 171, as well as portions of former street rights-of-way along Jackson Street, Pacific Avenue, and Drumm Street) with the portion of SWL 351 south of the former Jackson Street right-of-way that would be occupied by residential and other non-trust development. The property that would be transferred into the public trust would become new publicly accessible open space (Jackson Common and Pacific Avenue Park, and a widening of the existing Drumm Street pedestrian walkway). The proposed exchange would likely satisfy the requirements of Chapter 310, Stats. 1987, because portions of Seawall Lot 351 that the project sponsor proposes to be exchanged out of the trust (1) have been filled and reclaimed, (2) are located across The Embarcadero from the Bay and no longer have direct access to the Bay, and (3) are a small fraction of the Port’s overall trust holdings. In addition, an appraisal must show that the lands to be acquired have a value equal to or greater than the value of the lands for which they are to be exchanged. The State Lands Commission must also find that the lands are not needed or required for promotion of the public trust, and that no substantial interference with the trust uses and purposes will ensue.
IV. ENVIRONMENTAL SETTING AND IMPACTS

The NOP/Initial Study found that the initial project proposal could have a significant impact with respect to the following environmental topics: aesthetics, cultural resources (archaeological resources), transportation and circulation, air quality, and shadow. The proposed project is substantially similar to the initial project proposal and thus the conclusions of the NOP/Initial Study likewise apply to the proposed project. This chapter assesses the project’s impacts under these topics. In addition, this chapter includes sections on land use for informational purposes, on recreation in response to comments submitted on the NOP/Initial Study, and on greenhouse gases, sea level rise, and biological resources. In each of these environmental sections, existing conditions are described first, under the heading Setting. These existing conditions serve as the baseline for the analysis of potential environmental impacts from the proposed project under the heading Impacts. Cumulative impacts from the proposed project are analyzed for each environmental topic. Mitigation measures are identified to avoid, eliminate, or reduce significant adverse impacts of the proposed project. Where called for, improvement measures are also identified to reduce the effects of impacts that would be less than significant.

A. LAND USE

This section describes existing land uses on the project site and in the site vicinity; describes reasonably foreseeable development within the project area; and analyzes changes in land use resulting from the proposed project and cumulative development.

SETTING

EXISTING LAND USES

Project Site

Existing uses on the project site consist of a private athletic club, comprising most of the site, and a public parking lot in the southeastern portion of the site along The Embarcadero. See Figure II 2: Existing Uses on the Project Site, p. II.4.

Golden Gateway Tennis & Swim Club

The athletic club portion of the project site (consisting of three parcels running from north to south: Block 168/Lot 58, Block 171/Lot 69, and Block 201/Lot 12) is owned by the Golden Gateway Center and is occupied by the Golden Gateway Tennis & Swim Club (operated by Western Athletic Clubs). The three lots total approximately 110,700 square feet (sq. ft.). The
IV. Environmental Setting and Impacts
A. Land Use

The athletic club has nine outdoor tennis courts (eight doubles courts and one singles court), which occupy approximately 59,400 sq. ft. There are also two outdoor heated swimming pools and other outdoor spaces occupying approximately 22,000 sq. ft., three buildings with a site footprint of approximately 3,500 sq. ft. (with approximately 4,570 gross square feet [gsf] of total space), and a surface parking lot of approximately 6,000 sq. ft.\(^1\) Other uses within the athletic club include a basketball half-court, landscaping, and walkways.

The northern athletic club parcel (Block 168/Lot 58) is occupied by one tennis court oriented parallel to The Embarcadero. Two triangular areas on this parcel are outside of the fence enclosing the northernmost tennis court, and are adjacent to the walkway and public utilities easement west of the project site. These areas are planted with trees and lawn. The center athletic club parcel (Block 171/Lot 69) is occupied by three tennis courts, the basketball half-court, the outdoor swimming pools, a lawn, and two buildings. One building is a 400-gsf, one-story tennis shack, and the other is a 1,730-gsf, one-story building with storage lockers, showers, restrooms, and dressing rooms. There is a utilities easement on the center parcel (as well as Seawall Lot 351), running in an east-west direction and aligned with Jackson Street. The southern athletic club parcel (Block 201/ Lot 12) is occupied by five tennis courts, the 17-space private parking lot serving the athletic club, and a 2,440-gsf clubhouse and pro shop. The clubhouse building is concrete with a tented upper story; there are two one-story wooden sheds (one on the east side of the clubhouse building and one just south of the northernmost tennis court.)

Public Parking

Seawall Lot 351, which includes Block 201/Lot 13, occupies the southeastern portion of the project site along The Embarcadero and covers about 27,900 sq. ft. It is owned by the Port of San Francisco. Seawall Lot 351 is occupied by a 105-space surface parking lot. Of those spaces, ten unassigned spaces are reserved for use by the Port of San Francisco. The entire Seawall Lot 351 is controlled by the ground lessee of the Ferry Building pursuant to a Parking Agreement with the Port, in satisfaction of parking rights granted to the ground lessee. The Ferry Building ground lessee operates the lot as a public pay lot through Ace Parking Management. There are entrances to the parking lot along The Embarcadero and Washington Street.

\(^{1}\) The Golden Gateway Tennis & Swim Club also has a 7,355-gsf health club facility, located across Drumm Street in Golden Gateway Center.
**Project Site Vicinity**

Land uses in the vicinity of the project site are shown on Figure IV.A-1: Existing Land Uses in the Project Site Vicinity.

**Golden Gateway Development**

The land directly to the west and northwest of the project site is occupied by Golden Gateway Center and Golden Gateway Commons, which are high-density residential communities on the periphery of the Downtown Financial District. Golden Gateway Center and Golden Gateway Commons together contain about 1,400 residential units.

Golden Gateway Center includes four residential towers (the 22-story, 400-unit Richard Henry Dana building; the 25-story, 178-unit Buckelew building; the 25-story, 178-unit Macondray building; and the 22-story, 440-unit William Heath Davis building) and 58 townhouses within the area bounded by Drumm, Washington, Battery, and Jackson Streets. The residential units are constructed over two two-story garage blocks (containing 927 parking spaces total) and ground-floor commercial space (53,000 gsf). The Golden Gateway Tennis & Swim Club operates a fitness center on the ground floor of the William Heath Davis building.

Sydney G. Walton Square is a 2-acre open space bounded by Pacific Avenue and Front, Davis, and Jackson Streets. The open space is owned and maintained by Golden Gateway Center but is publicly accessible.

Golden Gateway Commons consists of three two-story, block-square, base structures containing commercial uses (over 237,900 gsf total of offices and retail) and parking (about 550 parking spaces). Two- and three-story residential structures are constructed atop the base structure (155 units).

**One Maritime Plaza**

One Maritime Plaza (formerly known as the Alcoa Building) is about one block southwest of the project site, within the block bounded by Washington, Clay, Battery, and Davis Streets. The 25-story office building is built over a 1,325-car, three-story public garage. Maritime Plaza, a publicly accessible open space that surrounds the building, is two stories above the street at the podium level; two single-story office buildings are within the plaza. The office buildings contain approximately 534,000 gsf.
Embarcadero Center

One block south of the project site is the Embarcadero Center, a six-block complex with five office buildings, an interconnected gallery of shops and restaurants, two hotels, and 2,000 spaces of below-ground parking. The office buildings (One through Four Embarcadero Center and Embarcadero West) are 30 to 45 stories tall and contain approximately 4 million gsf of office and retail space. The retail uses occupy approximately 270,000 gsf on the first three levels of the office buildings. The hotels, Le Meridien at the western end of the complex and the Hyatt Regency at the eastern end, are 25 stories and 20 stories tall, respectively.

Parks and Open Space

The land immediately to the south and southwest of the project site is occupied by public open spaces and other public uses on Assessor’s Blocks 202 and 203. Block 202 is public open space (part of Sue Bierman Park) under the jurisdiction of the Recreation and Park Department. On the block, the original design of the park included lawns, walkways, a space frame structure, and trees along the perimeter. In late 2010, a renovation project was undertaken to reorient the pedestrian walkways, re-landscape the park, and remove the space frame structure.

Block 203 contains a pump station and maintenance yard under the jurisdiction of the San Francisco Public Utilities Commission, and public open space (part of Sue Bierman Park) under the jurisdiction of the Recreation and Park Department. The public open space is densely planted with trees and includes a lawn area, seating, and walkways. The walkways provide access to a pedestrian bridge crossing Davis Street to the Maritime Plaza open space.

Maritime Plaza is an above-grade open space on the roof of the parking garage at One Maritime Building at 300 Clay Street. The plaza includes benches, tables, landscaping, and a lawn area.

South of Sue Bierman Park is Justin Herman Plaza, a public open space bounded by Market Street, Drumm Street, and The Embarcadero. The majority of the park includes an open plaza and the Vaillancourt Fountain. Across The Embarcadero from the project site is the Embarcadero Promenade (also known as Herb Caen Way), an approximately 3-mile-long waterfront pedestrian promenade extending from Fisherman’s Wharf to China Basin.

Sydney G. Walton Square, a publicly accessible open space one block west of the project site, is discussed above under “Golden Gateway Development.”

Pier 7, which is across The Embarcadero from the northern end of the project site, is a public promenade and fishing pier that extends approximately 900 feet into San Francisco Bay.
Harry Bridges Plaza is a public plaza on The Embarcadero directly across from the Ferry Building. The plaza does not include landscaping other than street trees.

Ferry Plaza is a public plaza on the water side of the Ferry Building. The plaza contains landscaping, public art, and seating areas. In addition to serving as a ferry terminal, the plaza is used as an open-air farmers’ market.

Waterfront Development

Across The Embarcadero east of the project site are Piers 1, 1-1/2, 3, and 5. Pier 1 is occupied by offices (for the Port of San Francisco and others) and restaurants. Piers 1-1/2, 3, and 5 were rehabilitated and re-opened in fall 2006 for office, restaurant, and retail uses and public open space. In addition, Pier 3 provides parking and dock space for excursion boat operations.2 North of Pier 3 (and directly east of the northern end of the project site) is Pier 7, a public promenade that extends about 900 feet into the Bay. About one block southeast of the project site is the Ferry Building, which has been renovated and supports a ground-floor marketplace, upper-floor offices, and an outdoor farmer’s market. (Piers 1, 1-1/2, 3, and 5 are within The Embarcadero Historic District, which is listed on the National Register of Historic Places. In addition, the Ferry Building, the Agricultural Building, and the Piers 1-5 bulkhead buildings are listed on the National Register individually.)

PLANNED DEVELOPMENT

Planned development projects in the vicinity of 8 Washington Street include the Exploratorium at Piers 15-17, the Cruise Ship Terminal at Pier 27,3 and activities related to the 34th America’s Cup at various locations between the Golden Gate Bridge and the Bay Bridge.

The Exploratorium at Piers 15-17

The Exploratorium is relocating from the Palace of Fine Arts, at 3601 Lyon Street, to Piers 15-17, along The Embarcadero, and construction started in October 2010. The project site, owned by the Port of San Francisco, is comprised of Pier 15, Pier 17, a connector building, a paved parking area between the two piers, and an office shack. The Exploratorium has leased from the Port Pier 15, the connector building and parking area, plus a portion of the walkway between the building and water edge, for use as a museum. The Exploratorium has an option to expand the museum into Pier 17 in the 17th year of its lease. Until then, the Port would continue to lease Pier 17 to

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3 The vicinity of 8 Washington Street includes the area within 0.5 mile of the project site.
commercial and light industrial users and proposes to lease approximately 5,000 gsf within Pier 17 for restaurant or other retail use. Total post-construction floor area in Pier 15 and the connector building will be approximately 245,000 gsf. The project also would include temporary and ceremonial berthing of ships, and a water taxi landing. Construction activities for the Exploratorium project are expected to occur over an approximately 26-month period. 4

**Cruise Ship Terminal at Pier 27**

For the purpose of the 2035 cumulative transportation analysis in this EIR, it is assumed that an anticipated development project at Pier 27, the James R. Herman Cruise Ship Terminal at Pier 27 would include about 120,000 gsf of space.

**America’s Cup**

The 2035 cumulative land use assumptions do not account for event activities related to the 34th America’s Cup race, recently awarded to San Francisco, and which would take place in 2012/13. These sport activities are generally considered temporary and are therefore not included in the development of long-term land use and traffic projections. The potential long-term development plans associated with the America’s Cup are undefined at this time. On the other hand, it is likely that they would be similar in uses and intensities to those projects previously developed for those sites under consideration (Piers 19/23, Piers 26/28, Piers 30/32, etc.), which are included in the current land use and traffic projections.

**IMPACTS**

**SIGNIFICANCE THRESHOLDS**

The City and County of San Francisco has not formally adopted significance thresholds for impacts related to land use. The Planning Department Initial Study Checklist form provides a framework of topics to be considered in evaluating potential impacts under CEQA. Implementation of a project could have a potentially significant impact related to land use if the project were to:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan,

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local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

- Have a substantial impact upon the existing character of the vicinity.

The NOP/Initial Study for the initial project proposal found that the project would not result in any significant impacts with respect to land use, plans, and policies (see Appendix A). The same conclusion is likewise applicable to the proposed project given the similar land uses to the initial project proposal studied in the NOP/Initial Study. This topic is also discussed here in relation to the proposed project for informational purposes. Relevant plans and policies are discussed in Chapter III, Plans and Policies, and to the extent any conflicts are identified that might have environmental impacts, such conflicts are discussed in the relevant section of the EIR.

**IMPACT EVALUATION**

**Impact LU-1:  The proposed project would not physically divide an established community. (Less than Significant)**

The proposed project would introduce structures totaling approximately 575,000 gsf with a height of up to 12 stories (136 feet) to the project site, with about 290,500 gsf of residential uses, about 185,900 gsf of below-grade parking, about 29,100 gsf of retail and restaurant uses, a 12,800-gsf fitness center, and about 56,700 gsf of common areas and service and core space. The proposed project would also include about 40,000 sq. ft. of outdoor athletic club uses, and about 23,800 sq. ft. of publicly accessible open space.

The proposed residential, retail, and restaurant uses and public open space would be new uses on the project site. The existing surface parking lots on the athletic club site and Seawall Lot 351 (about 33,937 sq. ft.) would be removed and replaced with the proposed structured parking; the amount of parking would increase by about 151,960 sq. ft.

The existing buildings on the project site have a combined ground-floor footprint of approximately 3,700 sq. ft., which is approximately 3 percent of the project site. The four proposed buildings (health club, residential, and restaurant) would have a combined ground-floor footprint of approximately 49,100 sq. ft. which would be approximately 35 percent of the project site. The proposed project would be consistent with existing land uses in the vicinity of the project site; therefore, this impact would be less than significant.

The proposed project would remove the existing private athletic club and public parking facilities and replace these facilities with new modified facilities at a different location within the project site. The private athletic club would be closed during construction starting at the outset of the 27- to 29-month construction period, and continuing during the development of the site with residential, retail, restaurant, and replacement private athletic club uses and structured public
parking. In lieu of the existing outdoor facilities (nine existing tennis courts, basketball half
court, and two pools) the proposed project would include new modified outdoor facilities (four
new tennis courts and two new, slightly larger pools). The existing indoor fitness center,
currently located across Drumm Street at the Golden Gateway Center, would move into the
proposed larger fitness center building. The new tennis courts and pools would reopen within 24
months of commencement of construction.

The proposed project would temporarily displace the athletic club and its users and permanently
modify the facilities. During the temporary period of removal and reconstruction, current users of
the courts and pools would be inconvenienced. These users would have to find alternative
opportunities for recreation. As discussed in Section IV.H, Recreation, there are other
opportunities for public and private recreation in the project area. Site construction could cause
temporary disruption to site neighbors and health club users in the form of environmental effects
such as noise and dust during construction. These effects, which would not be significant, are
discussed in the NOP/Initial Study (Appendix A).

The permanent reduction in the number of tennis courts would lead to a corresponding reduction
in tennis memberships, in reduced accessibility to tennis courts among remaining members, or in
both reduced memberships and accessibility. Current members who chose not to re-join the
athletic club would need to find alternative recreation opportunities elsewhere. The effects of the
reduction in recreational opportunities at the site, including a reduction in tennis memberships,
are discussed in Section IV.H, Recreation, of this EIR. However, a smaller private tennis
membership would not constitute a physical division of an established community under CEQA.
Reduced accessibility to tennis courts among remaining members is addressed in Section IV.H,
Recreation.

The proposed development would be incorporated into the established street plan and would
create no impediment to the passage of people or vehicles. The project would be constructed
entirely within the boundaries of the existing project site, and would not physically displace or
substantially alter off-site uses. For those reasons, the project would not physically divide an
established community. This impact would be less than significant.

**Impact LU-2: The proposed project would not have a substantial impact on the existing
center of the vicinity. *(Less than Significant)*

The existing small buildings, perimeter fencing, paved tennis courts, surface parking, and
landscaping on the project site currently serve as a transition between the dense downtown high-
rise core to the south, mixed high-rise and lower-scale residential areas to the west and northwest,
and the San Francisco Bay to the east. The area of the project site can be characterized by the
high-rise, high-density residential buildings of the Golden Gateway Center; the mid-rise, mixed-
use Golden Gateway Commons; the historic Piers 1-5 bulkhead buildings, promenade, and piers
across The Embarcadero; the high-rise One Maritime Plaza office building and Embarcadero Center mixed-use complex; public green spaces, walkways, plazas, and other open spaces at Sue Bierman Park, Ferry Park, Sydney G. Walton Square, Maritime Plaza, Justin Herman Plaza, and the Ferry Building; and The Embarcadero itself, a heavily used transportation corridor. There are a variety of uses, building heights and scales, and densities. There are also a variety of streetscapes, ranging from pedestrian-oriented corridors with fine-grained detail and visual and physical access, to corridors characterized by blank walls and parking entrances. In general, the area experiences high levels of pedestrian and vehicle activity.

The proposed project would result in the introduction of residential, retail, and restaurant uses to the site. The project would modify the existing private athletic club uses on the site by reducing the number of tennis courts and private outdoor recreation space, and by relocating the existing fitness center from Golden Gateway Center to the proposed buildings and expanding the center. The character of the project site would change from smaller scale athletic club and parking uses to a mix of high-intensity, primarily residential use and athletic club uses. The area affected (including the courtyard between the two buildings) would be approximately 1.4 acres, or about 41 percent of the project site; about 59 percent of the site would be developed with lower-height and smaller-scale athletic club uses or devoted to public open spaces.

The proposed project would result in a reduction of the number of tennis courts on the site from nine to four. The amount of space used for tennis courts would also decrease by about 19,300 sq. ft. (about 32 percent). The tennis courts are privately operated and are accessible primarily to athletic club members. The courts and other outdoor athletic club facilities are available to community members on a limited basis as part of certain programs; these programs would continue with the proposed project. The project would not result in a reduction of publicly owned recreation space; the potential recreation effects of the loss of the private tennis courts are discussed in Section IV.H, Recreation, of this EIR. The project would provide public open space in the form of the Jackson Common, an approximately 9,500-sq.-ft. landscaped area along the former Jackson Street right-of-way within the project site; Pacific Avenue Park, an approximately 11,500-sq.-ft. landscaped park at the northern end of the project site; and a 2,800-sq.-ft. strip that would effectively widen the existing Drumm Street pedestrian walk from Jackson Street north to The Embarcadero. These three open spaces would total approximately 23,800 sq. ft.

The proposed residential, restaurant and retail, athletic club, and parking uses would be similar to existing uses in the area; the project would not introduce a new or incompatible type of land use. The project would extend the established residential and retail character of the area one block to the east along Washington Street and project frontage along the west side of The Embarcadero. The height of the proposed buildings would be taller than some of the existing buildings nearby (such as the Golden Gateway Commons and Piers 1-5 bulkhead buildings) and shorter than other buildings (such as the Golden Gateway Center and Embarcadero Center high-rises). The
intensity of the proposed land uses would be consistent with, and less dense than, the character of existing development in the area. The proposed buildings are intended to improve the character of the streetscape, by providing ground-floor restaurant, retail, and athletic club uses with access to the street instead of the surface parking and opaque fencing that characterize the site’s streetscape at present. The expected vehicle and pedestrian activity associated with the proposed project would be consistent with the levels of activity currently in the project area. The character of the part of the project site north of Jackson Street would be similar to the existing character. The proposed Jackson Common would introduce a visual and physical corridor through the project site.

The proposed project’s impacts on the character of the area would be less than significant under CEQA, for the reasons noted above.

Impact LU-3: The proposed project would not result in a significant cumulative impact related to Land Use. (Less than Significant)

The proposed project and anticipated cumulative development would intensify land uses in the project area. The proposed relocation of the Exploratorium to Piers 15-17 and the potential cruise ship terminal project at Pier 27 would add substantial cultural/entertainment, maritime, and commercial uses to the northeast waterfront. Other potential cumulative development projects along The Embarcadero could lead to increased residential, commercial and maritime uses and intensity in the northeastern part of the City. The 34th America’s Cup regatta was recently awarded to San Francisco. Although this sporting event is temporary in nature, there would be some long-term development plans associated with this event. Those long-term development plans have not yet been defined, but it is likely that they would be similar in uses and intensities to those projects previously considered for those sites (Piers 19/23, Piers 26/28, Piers 30/32, etc.), which are included in the current land use and traffic projections.

One of the primary impacts of anticipated cumulative development would be an increase in vehicle and pedestrian activity in the project area. The transportation and circulation impacts of cumulative development are analyzed in Section IV.D, Transportation and Circulation, of this EIR. Given the existing dense, urban nature of the project area and the high levels of activity already present, cumulative development would not result in significant changes in land use character. No mitigation is necessary.
B. AESTHETICS

The Setting discussion of this section describes the existing visual character of the 8 Washington/Seawall Lot 351 project site and its immediate vicinity; presents and describes photographic views of existing conditions of the project site and its visual setting; identifies existing visual resources in the area that could be potentially affected by the proposed project; and identifies relevant urban design policies.

The Impacts discussion in the section identifies the considerations applied when evaluating the significance of impacts on visual quality, and describes and evaluates impacts on visual resources and visual quality with reference to visual simulations of the proposed project.

SETTING

VISUAL CHARACTER OF THE PROJECT SITE AND ITS ENVIRONS

Project Site

The project site is relatively flat and is occupied by nine tennis courts and three small, low-scale buildings comprising the Golden Gateway Tennis & Swim Club, and the asphalt-paved surface parking lot fronting The Embarcadero on Seawall Lot 351. The Golden Gateway Tennis & Swim Club portion of the project site is enclosed by a 14-foot-high, green-painted, cyclone fence with vertical wood slats inserted. The fence screens views of the club from the outside and contains light and glare from the illuminated tennis courts. Along Drumm and Washington Streets, a bed at the base of the fence is planted with English ivy. Light standards and the tops of the Golden Gateway Tennis & Swim Club structures are visible rising from behind the fence. From surrounding street-level vantage points in the vicinity of the project site, the fence appears as a low, dark-colored, horizontal form in the foreground of buildings that rise beyond the project site. The opaque perimeter fence obstructs pedestrian-level views into and through the project site.

The project site contains no notable geologic or historic visual features. The project site and adjacent public right-of-way at its perimeter are planted with approximately 163 trees representing 17 species. There are no “landmark” trees (as defined in Article 16 of the San Francisco Public Works Code) within the project site or within the adjacent public right-of-way. However, 36 trees within the project site have been identified as “significant” trees (as defined in
IV. Environmental Setting and Impacts
   B. Aesthetics

An arborist surveyed and assessed the trees on the project site. Generally, the trees on the project site and the adjacent street trees are in fair to poor condition. The condition of the trees is attributed to an inappropriate selection of species for the site conditions, limitations of the site soil volumes, and past pruning practices.

The trees within the project site and adjacent rights-of-way soften and screen views of the project site, add color, texture and visual interest, and provide some relief from the sun and wind. However, these trees are not individually prominent or venerable, and collectively do not comprise a coherent or memorable landscape setting. They are not considered scenic resources for the purposes of CEQA.

**Project Vicinity**

The surrounding visual setting of the project site is varied in character. Building height, massing, scale, materials, and architectural character do not conform to any strongly discernible pattern. The blocks surrounding the project site are located at the transition between the dense downtown high-rise core to the south, lower-scale residential areas to the north and west, and San Francisco Bay to the east.

Immediately to the west of the project site across Drumm Street is the 22-story William Heath Davis building, consisting of a two-story parking structure base covering nearly the entire block, surmounted by an apartment building bisecting the center of the block. The building’s horizontal rectilinear slab volume is unarticulated except by balconies and by a simplified cornice overhang at its parapet.

To the north and west of the project site across the utility easement are two buildings that are part of the Golden Gateway Commons residential complex. Roughly square in plan, these four-story buildings are built to the perimeter of their site and are separated by a landscaped right-of-way aligned with Pacific Avenue. The ground floors are arcaded (recessed from the street) along Davis Street. Their façades are clad in textured brickface.

The Piers 1, 1-1/2, 3, and 5 bulkhead buildings (the Piers 1-5 bulkhead buildings) line the east side of The Embarcadero across from the project site. These structures obstruct scenic views of

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1. Significant trees are those trees within the jurisdiction of the Department of Public Works, or trees on private property within 10 feet of the public right-of-way, that meet certain size criteria. To be considered significant, a tree must have a diameter at breast height of more than 12 inches, a height of more than 20 feet, or a canopy of more than 15 feet (Section 810A(a)).

2. Batchelder, Stephen, Consulting Arborist, *Preliminary Tree Survey Report, 8 Washington St., San Francisco, CA*, October 12, 2006, pp. 2-5. This report is on file with the Planning Department, 1650 Mission Street, Suite 400, San Francisco, and is available for public review as part of the project file.
the Bay and East Bay Hills beyond from publicly accessible areas in the vicinity of the project site. However, they are visual resources in their own right. (See aerial photo on the cover of this EIR). These buildings appear as a cohesive and continuous broad horizontal form along The Embarcadero. They are punctuated by three pedimented arched openings. Distinguished by their bold massing and their classically derived composition and detail, the Piers 1-5 bulkhead buildings are a prominent and distinctive visual presence in the area.

To the south and southwest of the project site are landscaped public open spaces on Assessor’s Blocks 202 and 203 (Sue Bierman Park), an urban park that contributes to the visual quality of the project setting, providing greenery and relief from the built environment. Further to the south and southwest, the 30- to 45-story Embarcadero Center buildings are sculpted rectilinear slab volumes aligned end to end along Clay Street, obstructing views of the downtown from within the project vicinity.

PHOTOGRAHIC VIEWS

The project site occupies a prominent position along The Embarcadero and across from the Sue Bierman Park open space. Photographic views from five locations have been selected by the Planning Department as representative of existing visual conditions at the project site when viewed from publicly accessible vantage points. (See Figure IV.B-1: Viewpoint Locations.) These represent street-level, pedestrian views from points around the project site from which the proposed project would be prominent, or represent important public scenic views (like those available from Telegraph Hill), or represent identified view corridors (like that along Washington Street, identified in the Port’s Waterfront Design & Access Element) that could be affected by the proposed project. In Figures IV.B-2 through IV.B-7, each view (denoted as “Existing”) is presented along with the same view on which is superimposed a visual simulation of the proposed project for comparison (denoted as “Proposed Project”), to be discussed later in this section under Impacts.

View A – From Embarcadero Promenade at Pier 7, Looking South

Looking south from the Embarcadero Promenade at Pier 7 (see Figure IV.B-2: View A - From Embarcadero Promenade at Pier 7, Looking South (Existing)), the project site is viewed in the context of the downtown from the Embarcadero Promenade, a location that is well traveled by pedestrians. From this viewpoint, the wide, palm-lined Embarcadero occupies the foreground. The Pier 5 Bulkhead Building (listed on the National Register of Historic Places) is visible along the waterfront. Downtown high-rise office buildings are visible rising from beyond The Embarcadero (Steuart Tower, Spear Tower, Four Embarcadero, and Three Embarcadero). Residential buildings adjacent to the project site (William Heath Davis building and Golden Gateway Commons) rise from beyond the existing fence that surrounds the Golden Gateway
Legend

PROJECT SITE

SOURCE: Square One Productions, Turnstone Consulting

FIGURE IV.B-1: VIEWPOINT LOCATIONS
FIGURE IV.B-2: VIEW A - FROM EMBARCADEO PROMENADE AT PIER 7, LOOKING SOUTH
IV. Environmental Setting and Impacts
   B. Aesthetics

Tennis & Swim Club. The Matson Building at 215 Market Street (a “Category I” Significant building under Planning Code Article 11 and listed on the National Register of Historic Places) is visible between Four Embarcadero and Three Embarcadero.

**View B – From Embarcadero Promenade at the Ferry Building, Looking Northwest**

In this view (Figure IV.B-3: View B - From Embarcadero Promenade at Ferry Building, Looking Northwest (Existing)), the project site is seen looking northwest from the Embarcadero Promenade in front of the Ferry Building (the visual focal point of the waterfront, a transportation hub, and popular waterfront destination). From this viewpoint, the wide, palm-lined Embarcadero occupies the foreground. Across The Embarcadero is the Sue Bierman Park open space, with the Alcoa Building in the background. Residential buildings adjacent to the project site (William Heath Davis building and Golden Gateway Commons) rise from beyond the existing fence that surrounds the Golden Gateway Tennis & Swim Club. The landmark Coit Tower atop Telegraph Hill is visible in the distance rising beyond the Golden Gateway Commons. The Pier 1 Bulkhead Building is visible along the Promenade on the right in this view. A general pattern of building heights stepping down toward the water is evident in this view.

**View C – From Clay Street, Looking North**

This view (Figure IV.B-4: View C - From Clay Street, Looking North (Existing)) shows the project site as seen across the Sue Bierman Park open space, beyond trees at the northern perimeter of the open space. The William Heath Davis building is seen to the west (to the left in this view). Golden Gateway Commons is seen rising from beyond the perimeter fence on the project site. The Pier 1 Bulkhead Building (listed on the National Register of Historic Places) is visible in the distance across The Embarcadero to the east (to the right in this view).

**View D – Along Drumm Street, Looking Northeast**

This view (Figure IV.B-5: View D - Along Drumm Street, Looking Northeast (Existing)) shows the project site beyond trees within the eastern portion of Sue Bierman Park. The western portion of Sue Bierman Park and beyond that, the William Heath Davis building, are visible to the west (left in this view). The Pier 1 Bulkhead Building is visible to the east (right in this view).

**View E – Along Washington Street, Looking East**

This view (Figure IV.B-6: View E - Along Washington Street, Looking East (Existing)) shows the view along Washington Street toward the Embarcadero. This view is identified in the Port of San
FIGURE IV.B-3: VIEW B - FROM EMBARCADERO PROMENADE AT FERRY BUILDING, LOOKING NORTHWEST
FIGURE IV.B-5: VIEW D - ALONG DRUMM STREET, LOOKING NORTHEAST
FIGURE IV.B-6: VIEW E - ALONG WASHINGTON STREET, LOOKING EAST
Francisco’s *Design & Access Element* as a “Street Corridor View of Architecture with a Waterfront Identity.”3 The Pier 1 Bulkhead Building located at the foot of Washington Street, although it is partially obscured by trees that are planted in the Washington Street median. The parking garage podium level of the William Heath Davis building, with townhouses above, are seen on the north side of Washington Street (to the left in this view).

**View F – From Calhoun Terrace on Telegraph Hill, Looking Southeast**

Telegraph Hill rises abruptly about four blocks north and west of the project site. Public rights-of-way on Telegraph Hill afford the nearest public hilltop views of the project site in the context of panoramic scenic views of the Bay, the East Bay hills beyond, and the Bay Bridge, over the rooftops of waterfront development (particularly the view from Calhoun Terrace at the edge of a steep drop on the south eastern slope of Telegraph Hill). In this view (Figure IV.B-7: View F - From Calhoun Terrace on Telegraph Hill, Looking Southeast (Existing)), looking southeast, the project site is visible in the distance, over the rooftops of buildings in the Northeast Waterfront at the base of Telegraph Hill and the Golden Gateway Commons development. Beyond the project site, the Piers 1-5 bulkhead buildings and the Ferry Building and Clocktower are visible along The Embarcadero. The William Heath Davis building rises to the west of the project site (to the right in this view) with downtown high-rise development rising beyond and inland from the Bay.

**EXISTING SCENIC VISTAS AND SCENIC RESOURCES**

This discussion of scenic vistas and scenic resources identifies important scenic views and visual features that are visible from nearby publicly accessible viewpoints.

For the purposes of this EIR analysis, public areas surrounding the project site consist of public streets and sidewalks, including Drumm Street, Washington Street, and The Embarcadero, as well as Sue Bierman Park across Washington Street from the project site. Despite the proximity of these areas to San Francisco Bay, views from these areas toward the Bay and the East Bay hills beyond are almost entirely obstructed by the Piers 1-5 bulkhead buildings at the water’s edge that line the east side of The Embarcadero across from the project site. Together they comprise a low (generally about 40 to 55 feet tall), broad (about 900 feet wide) barrier to views of the Bay from the project site and from public areas in the vicinity of the project site. The Piers 1-5 bulkhead buildings also obstruct views of the project site looking back to the City from publicly accessible piers on the Bay.

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BAY BRIDGE

EXISTING

PROJECT SITE

PROPOSED

PROPOSED PROJECT

FOUR EMBARCADERO CENTER
WILLIAM HEATH DAVIS BUILDING
FERRY BUILDING
PIERS 1-5

ALCOA BUILDING
TWO EMBARCADERO CENTER
BUCKELEW HOUSE
THREE EMBARCADERO CENTER
MACONDRAY HOUSE

EXISTING

PROPOSED

FIGURE IV.B-7: VIEW F - FROM CALHOUN TERRACE ON TELEGRAPH HILL, LOOKING SOUTHEAST

SOURCE: Square One Productions, Turnstone Consulting

8 WASHINGTON STREET / SEAWALL LOT 351
2007.0030E

IV.B.12
Although the Piers 1-5 bulkhead buildings are a visual barrier to views of the Bay and beyond as discussed above, these prominent and boldly scaled historic structures (listed on the National Register of Historic Places) are in themselves scenic resources of the built environment. The Northeast Waterfront Subarea Design and Access Criteria of the Waterfront Design & Access Element identifies the location of existing waterfront views and view types (i.e., views of the Bay across water, of maritime activities, of water along street corridors, of waterfront architecture along street corridors, from hilltops, and views back to the City from piers). As discussed above, the Element identifies an important view along Washington Street toward the Pier 1 Bulkhead Building (although this view is partially obscured by trees planted within the Washington Street median strip).

Coit Tower and Telegraph Hill are prominent and familiar scenic features that rise abruptly in the distant background of the project site when viewing the project site from the south and southeast. (See Figure IV.B-3 (Existing).) The nearby historic Ferry Building and its Clocktower are called out in the Waterfront Design & Access Element as the “focal point of this area and indeed, the centerpiece of the Waterfront.”

Panoramic public views of the San Francisco waterfront, the Bay, the Bay Bridge, and the East Bay Hills beyond are available from Telegraph Hill and other elevated inland locations, as identified in the Waterfront Design & Access Element.

REGULATORY FRAMEWORK

Identified below are applicable policy documents that will inform the design review of the proposed project. Potential conflicts with applicable plans and policies are discussed in EIR Chapter III, Plans and Policies.

San Francisco General Plan

The City’s General Plan provides policies and objectives to guide urban design decisions. City decision-makers will evaluate the proposed project in accordance with provisions of relevant plans and policies. Policies of the General Plan related to the topic of aesthetics are found in the Urban Design Element. The Urban Design Element calls for preserving and enhancing views and visual quality, and calls for new development to complement existing patterns of development.

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Northeastern Waterfront Area Plan

The Northeastern Waterfront Area Plan, an element of the General Plan, provides specific objectives and policies for the Northeastern Waterfront to enhance its unique aesthetic qualities and its historic maritime character. Policies of the Northeastern Waterfront Area Plan call for maintaining low structures near the water and increasing vertical development toward the downtown, preserving and creating view corridors toward the Piers 1-5 bulkhead buildings, preserving the prominence of the Ferry Building, and removing surface parking along The Embarcadero.

Port of San Francisco Waterfront Land Use Plan

Seawall Lot 351 is within the Ferry Building Waterfront Subarea of the Port of San Francisco Waterfront Land Use Plan. This area extends from Pier 5 to the Agriculture Building and includes Piers 1/2, 1, 1-1/2, and 3, the Ferry Building, and Ferry Plaza. The Waterfront Design & Access Element is a component of the Waterfront Land Use Plan, and is intended to guide the physical form of waterfront revitalization. The Waterfront Design & Access Element provides policy for the preservation and development of public access and open space, views, and historic resources, as well as architectural design criteria that will be applied to new development. Development of seawall lots, including Seawall Lot 351, must be consistent with the Public Trust, and should respect the scale and architectural character of the adjacent City neighborhoods. Seawall lot development should also maintain the City street corridor views identified in the Element, including views along Washington Street.

IMPACTS

SIGNIFICANCE THRESHOLDS

The City and County of San Francisco has not formally adopted significance thresholds for impacts related to aesthetics. The Planning Department Initial Study Checklist form provides a framework of topics to be considered in evaluating potential impacts under CEQA. Implementation of a project could have a potentially significant impact related to aesthetics if the project were to:

- Have a substantial adverse effect on a scenic vista;

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Seawall Lot 351 is subject to the common law public trust doctrine, as well as terms and conditions of the Burton Act, which is the trust grant from the State to the City (sometimes referred to collectively as the “public trust”). The public trust restrictions on Seawall Lot 351 are discussed in Chapter III, Plans and Policies.
IV. Environmental Setting and Impacts
   B. Aesthetics

- Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and other features of the built or natural environment that contribute to a scenic public setting;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties.

Potential impacts of the project on light and glare were determined to be less than significant in the NOP/Initial Study Checklist. On this basis, the topic of light and glare was excluded from further analysis in this EIR.

Design and aesthetics are, by definition, subjective and open to interpretation by decision-makers and members of the public. In determining whether an impact is significant under CEQA, the question is whether a project will affect the environment of persons in general, not whether a project will affect particular persons. A proposed project would therefore be considered to have a significant adverse effect on visual quality under CEQA only if it would cause a substantial and demonstrable negative change in the physical environment that affects the public in one or more ways listed above in this section.

METHODOLOGY

An independent consultant has photographed the project site from a range of publicly accessible vantage points around the project site. From these, the Planning Department selected five representative views that show the project site and its surrounding context. These were presented and described above (denoted as “Existing”). The existing view represents the baseline visual conditions of the project site and its vicinity. The consultant has produced computer-generated photomontages from project design data supplied by the project architect that are superimposed onto the baseline photograph. The photomontages (denoted as “Proposed Project”) are presented on the same page as the view of existing conditions, allowing the reader to compare existing photographic views with accurate and detailed visualizations of the proposed project, placed within the visual context of the project.

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7 Square One Productions photography from June 2007.
8 Square One Productions, October 2007.
IMPACT EVALUATION

Impact AE-1: The proposed project would not substantially affect scenic vistas and scenic resources visible from publicly accessible areas in the project vicinity. (Less than Significant)

This discussion of scenic vistas and scenic resources describes impacts on scenic vistas and scenic resources that are visible from nearby publicly accessible, street level viewpoints. (Project impacts on views from private residences are discussed below under Impact AE-2.)

Scenic Views of the Bay

The proposed buildings would not obstruct any existing public, street level scenic vistas of the Bay. As discussed above, public views of the Bay over the project site are already obstructed by the Piers 1-5 bulkhead buildings lining The Embarcadero across from the project site, the existing 14-foot-high fence surrounding the Golden Gateway Tennis & Swim Club, and the trees and vegetation on and around the project site. (See Figure IV.B-4 (Proposed Project).)

The Waterfront Design & Access Element identifies major water views from Telegraph Hill over Port property. The Element does not identify any such view over the project site. However, from public rights-of-way on Telegraph Hill, looking south and east toward downtown, the proposed buildings would be visible in the distance. The proposed buildings would be seen to the east of the high-rise William Heath Davis and Four Embarcadero buildings, at the edge of the downtown high-rise core stepping down in height toward the Bay. (See Figure IV.B-7 (Proposed Project).)

The proposed new buildings would not obstruct panoramic scenic views of the Bay and East Bay Hills beyond, the Bay Bridge or Downtown. For those reasons, the impacts of the proposed project on scenic views of the Bay would be less than significant.

Views of Piers 1-5 Bulkhead Buildings

The proposed buildings would not substantially obstruct existing pedestrian-level views of Piers 1-5 bulkhead buildings from surrounding streets and from Sue Bierman Park. As discussed above, public views of the Bay over the project site are already obstructed by the existing 14-foot-high fence surrounding the Golden Gateway Tennis & Swim Club, and the trees and vegetation on and around the project site. (See Figure IV.B-4 (Proposed Project).) The proposed project’s alignment along the north side of Washington Street would reinforce the northern edge of Sue Bierman Park and would preserve and frame the view corridor along Washington Street that terminates with the historic Pier 1 Bulkhead Building identified in the Waterfront Design & Access Element (this view is currently partially obscured by trees within the Washington Street median strip). (See Figure IV.B-5 (Proposed Project), and Figure IV.B-6 (Proposed Project).) As part of the proposed project, the median strip and its trees would be removed, and street trees
along the north sidewalk of Washington Street would be planted, enhancing views of the Pier 1 Bulkhead Building. The proposed Jackson Common would align with Jackson Street to open a new view corridor along Jackson Street that would terminate with the historic Pier 3 Bulkhead Building. The proposed Pacific Avenue Park would align with Pacific Avenue to open a new view corridor along Pacific Avenue that would terminate with the historic Pier 5 Bulkhead Building (see Figure II-3). For these reasons, impacts of the proposed project on views of the Piers 1-5 bulkhead buildings would be less than significant.

Views of Telegraph Hill

Telegraph Hill and Coit Tower are now visible from a segment of the Embarcadero Promenade directly in front of the northern end of the Ferry Building and further north. The proposed project would obstruct views of Coit Tower and Telegraph Hill currently seen rising in the background beyond the project site when viewed from the segment of the Embarcadero Promenade at the northern end of the Ferry Building. (See Figure IV.B-3 (Proposed Project).) From areas further south along The Embarcadero (like the central entrance to the Ferry Building and the plaza and crosswalk in front of the Ferry Building) views of Telegraph Hill and Coit Tower are now obscured by vegetation in Sue Bierman Park and street plantings along the west side of The Embarcadero. The Waterfront Design & Access Element identifies major views from, and over, Port property back to the City. It does not identify any major view from the Ferry Building over the project site toward Telegraph Hill. Likewise, no such view is identified in the General Plan or Northeastern Waterfront Area Plan. When viewed from the vantage point of a segment of the Embarcadero Promenade in front of the northern end of the Ferry Building, the obstruction of views toward Coit Tower/Telegraph Hill would diminish the visual reciprocity that exists from this vantage point between these familiar visual landmarks that contributes to a sense of spatial orientation and coherence within the City. However, continuing further north along the Embarcadero Promenade (about 250 feet) from in front of the Pier 1 Bulkhead Building, Coit Tower and Telegraph Hill would continue to be visible beyond the tennis courts at the northern portion of the project site and the Golden Gateway Commons development. In addition, the proposed project would not obstruct views of Coit Tower or Telegraph Hill that are currently available from Ferry Plaza on the water side of the Ferry Building. Coit Tower and Telegraph Hill would continue to be visible from numerous vantage points in the vicinity of the project site and the City. Because views of Telegraph Hill and Coit Tower would continue to be available from The Embarcadero in front of the nearby Pier 1 Bulkhead Building and from numerous other locations in San Francisco and around the Bay, the obstruction of views toward Coit Tower and Telegraph Hill from a segment of the Embarcadero Promenade in front of the northern end of the Ferry Building would not create a substantial adverse effect on a scenic vista or cause substantial damage to a scenic resource.
Views of the Ferry Building

When viewed from some locations on Telegraph Hill, the proposed buildings would obstruct a portion of the landmark Ferry Building (see Figure IV.B-7 (Proposed Project)), although the northern portion of the Ferry Building and the iconic Ferry Building Clock Tower would continue to be visible beyond the proposed project in this view. The lower-rise portions of the Ferry Building would continue to be visible from numerous vantage points in the vicinity of the project site and within the City, and would continue to function as the visual focal point of the waterfront. The proposed project would not obstruct the view of the Ferry Building Clock Tower from any of the proposed viewpoints. Because the Ferry Building would continue to be visible from numerous public vantage points around the City, the obstruction of the lower portions of the Ferry Building when viewed from some vantage points on Telegraph Hill would not create a substantial adverse effect on a scenic vista or cause substantial damage to a scenic resource.

Impact AE-2: The proposed project would not substantially alter the existing visual character of the project site and its surroundings. (Less than Significant)

As discussed above under Setting, the surrounding visual setting of the project site is varied in visual character. Building height, massing, scale, materials, and architectural character do not conform to any strongly discernible pattern.

The proposed project is intended to further the policies of the Urban Design Element, in particular Policy 3.3 (promote high quality of design for buildings to be constructed at prominent locations); Policy 3.4 (promote building forms that will respect and improve the integrity of open spaces and other public areas); Policy 3.5 (relate the height of buildings to important attributes of the City pattern and to the height and character of existing development); and Policy 3.6 (relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction).

The proposed project is intended to further the policies of the Northeastern Waterfront Area Plan, in particular Policy 10.1 (preserve the physical form of the waterfront and reinforce San Francisco’s distinctive hill form by maintaining low structures near the water, with an increase in vertical development near hills or the downtown core area); Policy 10.7 (enhance and maintain the physical prominence of the Ferry Building); and Policy 10.11 (maintain and enhance existing grade-level view corridors to the bulkhead buildings).

The proposed project is intended to further the policies of the Port of San Francisco’s Waterfront Design & Access Element of the Waterfront Land Use Plan specific to Seawall Lot 351, in particular: Massing (acknowledge the massing and street enclosure relationship with the bulkhead buildings across The Embarcadero [e.g., bold forms of similar height, constructed to The Embarcadero edge]); Site Coverage (allow maximum lot coverage); Orientation (locate primary
uses and pedestrian entrances on The Embarcadero; Transparency (avoid blank ground floor walls along the Embarcadero by providing views into the ground floor of buildings); Embarcadero Character (reinforce the large scale of The Embarcadero by using bold forms, deep recessed building openings, and strong detailing on building facades facing The Embarcadero); and Service (avoid service and parking access from The Embarcadero).

Below is a description and analysis of project impacts on the visual quality of the site and its surroundings with respect to building massing and design scale. For informational purposes, this section also discusses how the project is likely to affect private residential views.

**Building Massing and Design**

The blocks surrounding the project site are located at the transition between the dense downtown high-rise core to the south, lower-scale residential areas to the north and west, and the San Francisco Bay to the east.

The proposed buildings would effect a transition in height from the downtown high-rise office core to the south of the project site down to the low-rise Golden Gateway Commons complex north of the project site. (See Figure IV.B-2 (Proposed) and Figure IV.B-3 (Proposed).) From south to north, the west building steps down from 12 stories to 8 stories; the east building steps down from six stories to four stories.

Likewise, the proposed buildings would effect a transition in height from the Golden Gateway Center residential high-rise buildings down to the low Piers 1-5 bulkhead buildings at the water’s edge. (See Figure IV.B-2 (Proposed), Figure IV.B-3 (Proposed), and Figure IV.B-4 (Proposed).) From west to east, the proposed project steps down from the 12-story west building, to the 6-story east building. The proposed buildings would frame and direct views along The Embarcadero and along Washington Street toward the Pier 1 Bulkhead Building. (See Figure IV.B-6 (Proposed).)

Under the proposed project, the massing south of the Jackson Street alignment would be articulated into two separate volumes: a 6-story east building along The Embarcadero, and a 12-story west building along Drumm Street. These two building volumes would be separated by about 45 feet at their north end along the proposed Jackson Common, and by about 120 feet at their south end along Washington Street. They would be connected at the ground floor to provide street-level continuity along Washington Street and along the proposed Jackson Common.

The overall volume of each residential building would be further articulated by rhythmically spaced recessed bays (vertical alignments of windows), breaking down the horizontal scale of development by creating vertically oriented sub-volumes along the street façades from four to five bays across. These articulations are intended to contribute to a greater sense of human scale, and add visual interest, texture and depth to the façade with a play of light and shadow.
The buildings would be contemporary in their architectural vocabulary and would not include overt historic referents. However, the residential buildings would be clad in limestone and would have “punched” window openings, intended to convey the sense of the solidity of masonry construction, and to complement the historic bulkhead buildings across The Embarcadero. Deeply recessed windows further contribute to the sense of solidity, and to a play of light and shadow on the façade. Retail ground floors would be transparent, intended to activate and contribute visual interest to the pedestrian environment, particularly along The Embarcadero. Projecting awnings would further differentiate the ground-floor base of the buildings and are intended to provide visual interest, as well as shelter for pedestrians.

For these reasons, impacts of the proposed project would not have a significant adverse impact on the visual character/quality of the site and its surroundings.

Views from Private Residences

Construction of the proposed buildings, up to 12 stories tall, on the southern portion of the project site would block or alter some existing private views that are available from some nearby residences, particularly those that look southeast, east, or northeast over the southern portion of the project site. The project would replace some long-range private views with shorter-range views of the proposed buildings. The proposed change in views could be experienced as an undesirable consequence for affected residents who have grown accustomed to existing visual conditions. At present, some private residences in the area have sweeping views of the Bay and bayfront buildings, including the Ferry Building. The project may obscure views or portions of views from some private residences. The nature and experience of this change for each of the affected residences would vary depending on the nature of the existing view over the project site, the position and proximity of the proposed new buildings within the residence’s view, and the subjective sensitivity of the viewer. Some representative private residential views that are likely to be most affected are identified for informational purposes below.

Within the 22-story William Heath Davis building, residential units at the east end of the building have east-facing windows with views over the project site, of the Piers 1-5 bulkhead buildings, and/or the Bay and beyond. These units also have balconies facing north or south. Views to the north from within the north-facing units would remain unobstructed, as would views to the south from within the south-facing units. The proposed buildings would have the greatest effect on views from residential floor levels within the William Heath Davis building that are at and below the height of the proposed project (at and below the 12th residential floor above the podium base). Bay views from east-facing windows, and balcony views looking directly to the east would be partially blocked by the proposed buildings from residential floor levels at and below the height of the proposed project. Other balcony views, including northeastern and southeastern views toward the Bay, would not be obstructed. From residential floors that are above the height of the
proposed project, east-facing views would be over the rooftops of the proposed buildings, and the impact on east-facing views would decrease with each successive floor level. From the lower of these floors, the proposed building would occupy the foreground of the view, and would block views to the waterfront. More distant views of the Bay, Bay Bridge, Yerba Buena Island, and East Bay Hills beyond would still be available over the project site.

The easternmost Ironship North townhouse (atop the podium structure shared with the William Heath Davis building, at its northeast corner) has views to the southeast (across Justin Herman Plaza, The Embarcadero, the Ferry Building, Bay Bridge and Bay), and views to the east (of the Piers 1-5 bulkhead buildings and the Bay beyond) that would be largely obstructed by the proposed buildings. The proposed buildings would not obstruct Bay views to the northeast for this residential unit.

The easternmost Ironship South townhouse (atop the podium structure shared with the William Heath Davis building, at its southeast corner) has views to the northeast and east (of the Piers 1-5 bulkhead buildings and the Bay beyond) that would be largely obstructed by the proposed buildings. The proposed buildings would not obstruct views to the southeast (across Justin Herman Plaza, The Embarcadero, the Ferry Building, Bay Bridge and Bay) for this unit.

Within the Golden Gateway Commons complex, south-facing windows near the southeast corner of the complex have views to the southeast (across Justin Herman Plaza, The Embarcadero, the Ferry Building and Bay Bridge) that would be obstructed by the proposed project. East-facing windows in the Golden Gateway Commons complex have views to the southeast (of the Piers 1-5 bulkhead buildings, Justin Herman Plaza, The Embarcadero, the Ferry Building and Bay Bridge) that would be obstructed by the proposed buildings. The proposed buildings would not obstruct views directly to the east and to the northeast from these residential units.

The proposed buildings would also affect views from other residential units, including some units on the lower floors within the Macondray building (at the northwest corner of Davis and Washington Streets) and the Buckelew building (at the southeast corner of Front and Jackson Streets) when looking directly east. These existing units would continue to have views to the north, northeast, and southeast over nearby open space and lower buildings in the area.

The alteration or interruption of private residential views is a commonly expected and experienced consequence of new construction within a densely populated urban setting. The changes to private views resulting from the proposed project would not substantially degrade the existing visual character or quality of the environment under CEQA.
Impact AE-3: The proposed project would not result in a significant cumulative impact related to Aesthetics. *(Less than Significant)*

The nearest current development proposals to the project site include the Exploratorium Project, which would relocate the Exploratorium museum within existing buildings at Piers15-17, a potential cruise ship terminal at Pier 27, and development associated with the 34th America’s Cup regatta. These development proposals are not part of the immediate visual setting of the project site. For these reasons, the proposed project and cumulative development would not contribute to a significant degradation of the visual environment of the project site or the greater project area.
C. ARCHAEOLOGICAL RESOURCES

A project that may cause a substantial adverse change in the significance of an historical resource is a project that may have significant effect on the environment. This section assesses the potential impacts on historical resources (specifically, archaeological resources) resulting from implementation of the proposed project.

For the purposes of this section, the term “cultural resources” is used synonymously with the term “historical resources” as defined by CEQA. Both “archaeological resources” and “historic architectural resources” are subset categories of historical resources. These terms are used to distinguish between these types of historical resources in environmental review because of differing methodologies for identification of resources, and for evaluation and mitigation of impacts.

The NOP/Initial Study for the proposed project (see Appendix A) found that the project would not adversely affect historic architectural resources or unique paleontological resources. Therefore, those topics will not be discussed in this EIR section.

SETTING

Independent consulting archaeologists, Archeo-Tec, Inc., have prepared an Archaeological Research Design and Treatment Plan for a previously proposed project within the project site. That study has been updated and expanded for the currently proposed project in an addendum (collectively, the ARDTP). The research and recommendations of the ARDTP are the basis for the analysis and conclusions of this EIR.

HISTORIC CONTEXT

In order to assess the likelihood of encountering archaeological resources within the project site, predict the archaeological property types that may exist within the project site, and provide a context for assessing the significance of archaeological resources that may be encountered, the ARDTP reviews the historical context of San Francisco’s waterfront at the project site.

The focus of the ARDTP’s review is from the Gold Rush era onward. The archival record contains no evidence of the presence of archaeological resources within the project site dating from the prehistoric, Spanish, Mexican, or early American periods. The ARDTP also indicates a low probability of encountering resources from these earlier eras because the project site

1 CEQA Section 21084.1.

2 Archeo-Tec, Archaeological Research Design and Treatment Plan for the 8 Washington Street Project, City and County of San Francisco, CA, January 2003; and Addendum Archaeological Research Design and Treatment Plan for the 8 Washington Street Project, City and County of San Francisco, CA, February 2011.
remained completely submerged on the earliest historic maps. However, the potential presence of pre-Gold Rush resources cannot be conclusively ruled out. The ARDTP cites instances of prehistoric remains recovered from submerged land, and notes that very old remains could exist below the bottom of the Bay as sea level changes in the last 15,000 years may have resulted in very deeply buried sites. During the Spanish, Mexican, and Early American periods, ships were anchored in the area of the project site and may have discarded refuse, ballast, or lost anchors that may lie with the project area on what was once the Bay bottom.

The historic context presented below focuses on the historic themes and issues related to the archaeological resources that are anticipated to be within the project site.

The Gold Rush Era Waterfront

Wharf Development

The shoreline in the northeastern area of San Francisco was the center of commerce and activity during the Gold Rush. By 1850, numerous wharves extended out from the feet of streets. As business boomed, wharves were extended further into deeper water, and marginal wharves that would later become streets were constructed perpendicular to the main wharves. Buildings were built up on pilings along the wharves. By the middle of 1850, many of San Francisco’s newly built wharves had become favored locations for the disposal of trash. Property was often intentionally thrown overboard, or may have been inadvertently dumped when wharves collapsed.

The Storeship Phenomenon

Some of the newly arrived vessels in San Francisco had been abandoned by their crews, who departed en masse for the gold fields. These derelict sailing ships could be purchased cheaply in 1849. The selected vessels were anchored alongside a wharf, or sometimes beached near the shoreline of the Bay. In many instances, the vessels were then modified and put to use for a wide range of purposes—as warehouses, restaurants, saloons, stores, hotels, and, in one case, the municipal jail. Most storeships were not secured and converted to buildings but were simply anchored for a few years and connected to the shore by small piers; some even returned to sea voyages. Three of the storeships (the Niantic, Apollo, and General Harrison) were far enough inland that they were hemmed in by filling and surrounded by buildings. These storeships were famous in part because they became permanent fixtures of the landscape. Following the catastrophic May 4, 1851 fire, the use of storeships was greatly diminished.
Waterfront Property Speculation

Even before the discovery of gold, San Francisco’s municipal authorities and commercial interests were envisioning the City’s expansion eastward into the Bay. Two phases of lot division had taken place: the first occurred in 1847 and created 450 lots; and the second occurred in 1850 when 343 additional lots were sold. Water lots were often sold with pilings on which buildings could be erected. The 8 Washington Street/Seawall Lot 351 project property was originally sold as a water lot. Peter Smith, a local land speculator, bought many of the lots at auction. In 1851, the State legislature passed an act to confirm the sales and to make the remaining unsold lots the property of the City, which would give 25 percent of the proceeds of the sales to the State. The Supreme Court of California eventually confirmed the sales to be legal.

Peter Smith sold three blocks adjacent to the 8 Washington/Seawall Lot 351 project site to Captain Fredrick Lawson, a Norwegian immigrant. Lawson bought the lots for the price of $3,500 each, indicative of the lack of confidence that Smith had in the title to the lands (during the early 1850s, the customary real estate value of a block on the City front would have been at least half a million dollars, as illustrated by the price paid for several blocks adjacent to Lawson’s property in 1853).

Scuttling Ships to Establish Title

Captain Lawson commonly established title to water lots by sinking ships on them. Lawson scuttled four ship hulks within the project vicinity in 1852: the Noble, Hardie, Bethel, and Inez. Lawson first secured his titles with pilings, but these proved too easy to remove for those whose wharf access was blocked, so he decided to use derelict ships. After purchasing a floating hulk, Lawson would employ a large gang of men to heavily ballast it. At night, Lawson’s men would drill a series of holes into the ship; these would be temporarily plugged while the hulk was moved to the desired location. When the hulk was in place, the plugs would be removed and the hulk would sink. The next morning, Captain Lawson would state that the scuttled hulks had foundered accidentally, but nevertheless constituted “improvements” comparable to the permanently moored storeships of the times.

Of these four ships, the storeship, the Bethel, may lie within the project site. It is estimated that the hulk of the Bethel lies buried roughly midway between Jackson and Pacific Streets, to the east of Davis Street and to the west of the line of the modern Embarcadero. This estimate places the ship probably within the northern half of the 8 Washington Street/Seawall Lot 351 project property. The archival record reviewed contains no mention of the hulk of the Bethel ever having been removed from the place she was sunk by Captain Lawson.

The Bethel was built at St. John’s, New Brunswick (now a province of Canada) prior to 1847, when she is listed as running from London to Boston and other ports. If discovered, the Bethel
would be the oldest known (and perhaps most intact) archaeological example of an early Canadian-built ship. After arriving at San Francisco during the first year of the Gold Rush, the Bethel saw service as a storeship at the corner of Pacific and Drumm Streets, one block east of the project site, before being acquired by Captain Lawson. Research does not indicate what type of storeship the Bethel was—most were warehouses—or to what extent the ship was built upon or modified during its conversion to storeship.

Post-Gold Rush Land Reclamation and Infrastructure

Filling the Bay

After the May 4, 1851 fire, a massive filling and land reclamation effort began in the areas formerly on piers over water. This effort continued until the completion of the New Seawall, whose construction began in 1877 and continued until 1913. In 1853, the 8 Washington Street/Seawall Lot 351 project site remained completely submerged beneath 10 feet of water in the northern portion of the site and 12 feet of water in the southern portion of the site. The only development within the project property at that time was the Pacific Street Wharf. The Jackson Street and Broadway wharves did not extend as far as the line of present-day Drumm Street.

The area between Front Street and the old waterfront at Montgomery Street was filled and formed the notorious neighborhood known as the Barbary Coast. The process of systematic land filling had begun in the western portion of the project site by the mid-1850s. By the close of the 1850s, this process had substantially diminished or, in some cases, eliminated the shallow waters in and around the western perimeter of the project area. In the immediate vicinity of the present project area, landfill consisted largely of basalt rock blasted from the slopes of nearby Telegraph Hill.

By 1859, the project site had been mostly filled and developed by this time, but the northern end of the project site remained submerged. The Pacific Street Wharf, running in an east-west direction, transected the open water through the project site. The area along the eastern boundary of the project site, corresponding to Seawall Lot 351, was submerged. The portion of the study area that had been filled was heavily developed. Buildings ringed the perimeters of the blocks, except for a large gap that appeared along Drumm Street, between Washington and Jackson Streets.

Construction of the Old Seawall

By the late 1850’s San Francisco’s harbor had increasingly become unviable as a port facility, as owners of the proprietary wharves failed to maintain them due to the imminent expiration of their ten-year leases and as the shoaling problem around the piers worsened in the absence of construction of a bulkhead along the waterfront. Due to the long-standing failure of the City and wharf companies to resolve these problems, the State asserted jurisdiction over San Francisco
harbor and created the Board of State Harbor Commissioners (BSHC) in 1863. The BSHC conferred with the primary responsibilities of repairing the wharves, constructing a bulkhead, and developing a waterfront plan that would reorganize port improvements and activities in a more rational manner. Wharf leases ran out gradually, and by 1866 the wharves were all publicly owned and the Commission began to improve them. This organization’s activities led to the development of the Old Seawall. The Old Seawall, intended to remedy the problem of the slippage of unconsolidated sand and mud used into Yerba Buena Cove, was designed by the firm of Lewis and Allard in September 1866; work began in 1867.

The Old Seawall ran from as far north as Union Street and as far south as Mission Street. It was constructed in four segments. Construction began on the section of the seawall that ran from Pacific to Washington Streets (partially within the project site) in 1867. The bulkhead was originally intended to extend as far south as Harrison Street. The BSHC’s Biennial Report for 1867 includes specifications for the materials, construction, and general dimensions of the seawall. The BSHC specified that the Old Seawall was to be constructed of solid masonry, 7 feet 3 inches at its base (atop a 13-foot-wide foundation of rock and concrete), 9 feet high, and 4 feet wide at the top (with a 2-foot-wide offset to receive the ends of wharf timbers). Its landward side was to be vertical, while its bayward side was to be battered (steeply sloped).

The bulkhead line was plotted to conform with the City’s waterfront, established by the legislature in 1851. Tidal current sweeping along its zigzag configuration caused back eddies that deposited sediment, creating the need for continuous expensive dredging. Rather than complete construction of the Old Seawall, in 1871 BSHC made plans to build a new bulkhead approximately 200 feet east of the former waterfront line. Plans to extend the Old Seawall from Mission Street to Howard Street were abandoned.

Construction of the New Seawall

The New Seawall was designed to follow a smooth curve of the shore instead of the angles of the street, to better conform to the Bay’s currents and, thus, reduce shoaling. This new bulkhead was begun in 1877 and today defines the shoreline of San Francisco. Its final segment was completed in 1916. Sanborn maps from 1887 and 1899 give the first detailed look at the 8 Washington Street/Seawall Lot 351 project site after the New Seawall was completed. The 1887 map shows the project site completely filled in and the New Seawall along the eastern edge of East Street. Washington Wharf, Jackson Wharf, and Pacific Wharf are identified extending out from East
Street, east of the project site. The New Seawall is a contributing resource within the Embarcadero Historic District. It would not be affected by the proposed project.

The Later 19th Century Waterfront

Later 19th century historical documentation suggests that the waterfront had a sinister aspect as an extension of the Barbary Coast. The 1880 U.S. Census indicates that the waterfront was largely comprised of laundries, saloons, restaurants, and boarding houses. Maritime professions such as sailors, deck hands, and wharf watchmen composed a significant proportion of the population up through the early 1900’s.

By the late 1880’s the small triangle north of Pacific Street within the project site had one small shed-like structure; the block between Pacific and Jackson Streets was dominated by R. Dunsmuir & Sons Coal Yard; storefronts and the “North Pacific House” lined Jackson Street; and the Ancon House, which was named after a steamer, and several storefronts lined Pacific Street. The block between Jackson and Washington Streets was partially bisected by east-west running Oregon Street. The northern portion of the block had a Chinese laundry, saloons and restaurants, boarding houses, and hotels. No specific residences are apparent, but many of the stores along Drumm and Jackson Streets are two-story buildings and may have had residential uses on the second floor. The southern portion of the block was dominated by R.D. Chandler’s Coal Yard and also contained saloons, stores, lodging houses, a chop house, a steamship coppersmith, a saloon/sailor’s boardinghouse, and a “Sailor’s Headquarters.” Some boarding houses could have operated as brothels.

The 1906 Earthquake to Present

The earthquake and fire of 1906 burned the project site on the first day of the fire. Though the rubble was sometimes cleared, it was often easier to rebuild on top of the structures. The structures within the project property, along with their contents, may still exist as an archaeological deposit.

By 1913, the 8 Washington Street/Seawall Lot 351 project site was densely developed with structures. The large coal yard had vanished. In its place, no fewer than 14 new buildings of various dimensions had been erected. The blocks contained a Chinese laundry and various commercial and industrial properties. The character of the neighborhood remained similar to that before the earthquake.

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3 The Embarcadero Historic District is discussed in the NOP/Initial Study, dated December 8, 2007, included as Appendix A, pp. 50-51.
By the mid-20th century, the project site had become industrialized; though a few stores remained, large areas were taken up by mills and factories. The 1949 Sanborn map shows this development. No historical research has shown any basement excavation or significant sub-surface impacts to the project property (swimming pools in the existing athletic club are the only apparent impact).

**REGULATORY FRAMEWORK**

**CEQA and Archeological Resources**

CEQA considers archaeological resources as an intrinsic part of the physical environment and, thus, requires for any project that the potential of the project to adversely affect archaeological resources be analyzed (CEQA Section 21083.2). For a project that may have an adverse effect on a significant archeological resource, CEQA requires preparation of an environmental impact report (CEQA and Guidelines, Sections 21083.2, 15065).

**Significance of Archeological Resources**

CEQA recognizes two different categories of significant archeological resources: “unique” archeological resource (CEQA Section 21083.2) and an archeological resource that qualifies as a “historical resource” under CEQA (CEQA and Guidelines Sections 21084.1, 15064.5). An archeological resource can be significant in both categories or in just one, but the process by which the resource is identified, under CEQA, as either one or the other is distinct (CEQA and Guidelines Sections 21083.2(g) and 15064.5(a)(2)).

An archeological resource is an “historical resource” under CEQA if the resource is:

1. Listed on or determined eligible for listing on the California Register of Historic Resources (CRHR) (CEQA Guidelines Section 15064.5). This includes National Register-listed or -eligible archeological properties;
2. Listed in a “local register of historical resources”;\(^4\)
3. Listed in a “historical resource survey” (CEQA Guidelines Section 15064.5(a)(2)).

Generally, an archeological resource is determined to be an “historical resource” due to its eligibility for listing to the California Register of Historic Resources/National Register of Historic Places because of the potential scientific value of the resource, that is, “has yielded, or may be likely to yield, information important in prehistory or history” (CEQA and Guidelines Section 15064.5 (a)(3)). An archeological resource may be CRHR-eligible under other Evaluation Criteria, such as Criterion 1, association with events that have made a significant contribution to the broad patterns of history; Criterion 2, association with the lives of historically important

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\(^4\) A “local register of historical resources” is a list of historical or archeological properties officially adopted by ordinance or resolution by a local government (Public Resources Code 5020.1 (k)).
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persons; or Criterion 3, association with the distinctive characteristics of a type, period, region, or method of construction. Appropriate treatment for archeological properties that are CRHR-eligible under Criteria other than Criterion 4 may be different than that for a resource that is significant exclusively for its scientific value.

Failure of an archeological resource to be listed in any of these historical inventories is not sufficient to conclude that the archeological resource is not an “historical resource.” When the lead agency believes there may be grounds for a determination that an archeological resource is a “historical resource,” then the lead agency should evaluate the resource for eligibility for listing to the CRHR (CEQA Guidelines Section 15064.5(a)(4)).

A “unique archeological resource” is a category of archeological resources created by the CEQA statutes (CEQA Guidelines Section 21083.2(g)). An archeological resource is a unique archeological resource if it meets any of one of three 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.

Under CEQA, evaluation of an archeological resource as an “historical resource” is privileged over the evaluation of the resource as a “unique archeological resource,” in that CEQA requires that “when a project will impact an archeological site, a lead agency shall first determine whether the site is an historical resource” (CEQA Section 15064.5 (c)(1)).

Evaluation of an Archaeological Resource as Scientifically Significant

In requiring that a potentially affected archeological resource be evaluated as an historical resource, that is as an archeological site of sufficient scientific value to be CRHR-eligible, CEQA presupposes that the published guidance of the California Office of Historic Preservation (OHP) for CEQA providers is to serve as the methodological standard by which the scientific, and thus, the CRHR-eligibility, of an archeological resource is to be evaluated. As guidance for the evaluation of the scientific value of an archeological resource, the OHP has issued two guidelines: Archaeological Resource Management Reports (1989) and the Guidelines for Archaeological Research Designs (1991).
Integrity of Archeological Resource

Integrity is an essential criterion in determining if a potential resource, including an archeological resource, is an historical resource. In terms of CEQA “integrity” can, in part, be expressed in the requirement that an historical resource must retain “the physical characteristics that convey its historical significance” (CEQA Section 15064.5 (b)).

For an archeological resource that is evaluated for CRHR-eligibility under Evaluation Criterion 4, “has yielded or may be likely to yield information important to prehistory or history,” integrity is conceptually different than how it is usually applied to the built environment. For an historic building, possessing integrity means that the building retains the defining characteristics from the period of significance of the building. In archeology, an archeological deposit or feature may have undergone substantial physical change from the time of its deposition but it may yet have sufficient integrity to qualify as a historical resource. The integrity test for an archeological resource is whether the resource can yield sufficient data (in type, quantity, quality, diagnosticity) to address significant research questions. Thus, in archeology “integrity” is often closely associated with the development of a research design that identifies the types of physical characteristics (“data needs”) that must be present in the archeological resource and its physical context to adequately address research questions appropriate to the archeological resource.

Significant Adverse Effect on an Archeological Resource

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource significant. For an archeological resource that is an historical resource because of its prehistoric or historical information value, that is, its scientific data, a significant effect is impairment of the potential information value of the resource.

The depositional context of an archeological resource, especially soils stratigraphy, can be informationally important to the resource in terms of datation and reconstructing characteristics of the resource at time of deposition and interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible to the CRHR under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on the artifactual material but may include effects on the soils matrix in which the artifactual matrix is situated.

Mitigation of Adverse Effect to an Archeological Resource

Preservation in place is the preferred treatment of an archeological resource (CEQA and Guidelines Sections 21083.2(b); 15126.4 (b)(3)(a)). When preservation in place of an archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation.
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(CEQA Section 15126.4 (b)(3)(C)). In addition to data recovery, under CEQA, the mitigation of effects to an archeological resource that is significant for its scientific value requires curation of the recovered scientifically significant data in an appropriate curation facility (CEQA Section 15126.4(b)(3)(C), which is a curation facility compliant with the Guidelines for the Curation of Archaeological Collections (California Office of Historic Preservation 1993). Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are to be deposited in the California Historical Resources Regional Information Center (CEQA Guidelines Section 15126.4(b)(3)(C).

Effects to Human Remains

Under State law, human remains and associated burial items may be significant resources in two ways: they may be significant to descendent communities for patrimonial, cultural, lineage, and religious reasons, and human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendent groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines Section 15064.5 (d), Public Resources Code Section 5097.98). In other cases, the concerns of the associated descendent group regarding appropriate treatment and disposition of discovered human burials may become known only through outreach. Beliefs concerning appropriate treatment, study, and disposition of human remains and associated burial items may be inconsistent and even conflictual between descendent and scientific communities. CEQA and other State regulations concerning Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects to human remains within the contexts of their value to both descendent communities and the scientific community:

- When an initial study identifies the existence or probable likelihood that a project would impact Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the Native American Heritage Commission (NAHC) to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines Section 15064.5(d), Public Resources Code Section 5097.98).

- If human remains are accidentally discovered, the county coroner must be contacted. If the county coroner determines that the human remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC must identify the most likely descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items. If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (Public Resources Code Section 5097.98).

- If potentially affected human remains/burial may have scientific significance, whether or not having significance to Native Americans or other descendent communities, then
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under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines Section 15064.5(c)(2)).

EXPECTED ARCHAEOLOGICAL RESOURCES

CEQA-significant archaeological resources have not been found at the project site. In view of the site’s history, and the discovery of such resources at other construction sites in the area, significant archaeological resources are likely to exist at the site; these resources may be unearthed during project construction. These are identified below, followed by a discussion of the basis for their potential significance under California Register of Historical Resources criteria.

The Remains of Wharf Structures

The Jackson Street Wharf and the Pacific Street Wharf ran through the 8 Washington/Seawall Lot 351 project property; the Washington Street Wharf ran adjacent to the project site along its southern border. Remains of these wharves may be present within the project site along the alignments of these streets. Construction activities along the former waterfront of San Francisco have revealed surviving wharf structures, including large numbers of pilings.

The remains of wharf structures, if found, could be significant under CRHR Criterion 1 (Events) for their association with commercial and maritime development of San Francisco’s waterfront during the Gold Rush era, and with early efforts to plan and rationalize the waterfront. The remains of wharf structures could also be significant under CRHR Criterion 4 (Information Potential) if they yielded significant historical or technological information (such as evidence of neglect or diligence in maintaining the wharfs, or unusual, innovative, or improvised materials and methods of construction/maintenance/repair).

Wharf-side Discards

Activities along the Pacific, Jackson, and Washington wharves may have left intentional discards (such as broken or non-sellable merchandise, personal or household refuse, or industrial/commercial waste) or accidental losses of goods. Wharf-side refuse is most likely to be found alongside and within the alignments of the former wharves.

Wharf-side refuse, if found, could be significant under CRHR Criterion 4 (Information Potential) for its potential to yield information about the demographics and economy of the Gold Rush period waterfront (such as consumption patterns, trade connections, types of businesses). Wharf-side discards may also reveal information about the sequence of land filling.
The Bethel and Other Scuttled Gold Rush Era Ships

As described previously, historical research indicates that Captain Fred Lawson may have scuttled the storeship Bethel within the project site. Its predicted location is between Jackson and Pacific Streets between Davis Street and The Embarcadero. The estimated dimensions of the Bethel are 120 feet by 26 feet. The top of the Bethel is estimated to lie approximately 10 feet below the present ground surface. Captain Lawson reportedly scuttled three other ships, the Hardie, Noble, and Inez, in the project vicinity. These scuttled ships may also be present within the project site, even though their position was recorded to be on an adjacent block. Unrecorded sunken ships or ship parts not found in the historical record may also be present. The Bethel could be eligible for inclusion in the California Gold Rush Shipwreck Thematic Group and is thus eligible for listing in the National Register of Historic Places.

The remains of the Bethel (and other Gold Rush era ships), if found, would be potentially significant under all four CRHR Criteria. Under Criterion 1 (Events), it would be potentially significant for its association with the Gold Rush, the early development of San Francisco’s waterfront, and its association with mid-19th century international trade. Under Criterion 2 (Persons), it would be potentially significant for its association with the property claim of, and scuttling by, the notorious waterfront speculator Frederick Lawson. Under Criterion 3 (Design/Construction) and Criterion 4 (Information Potential), the remains of the Bethel would be significant for information it may reveal about 19th century shipbuilding technologies. It may also contain evidence of adaptation to storeship use, scavenging activities, or Lawson’s scuttling.

The Old Seawall

A segment of the Old Seawall runs through the project site within Seawall Lot 351 along The Embarcadero, approximately 10 feet below the current ground surface.

The Old Seawall was determined eligible for listing in the National Register of Historic Places in 1979 under Criterion A as a resource associated with “events that made a significant contribution to the broad pattern of our history” (i.e., for its connection with waterfront infrastructure development). As such, it is deemed a historical resource under CRHR Criterion 1 (Events). It may also be significant under CRHR Criterion 3 (Design/Construction) and Criterion 4 (Information Potential) if the actual construction of the seawall is found to deviate from the BSHC’s detailed construction plans and specifications for the Old Seawall. Deviation (including changes in size, extent, location, of materials) may contribute information to our understanding of the construction of this feature that is not available in the documentary record. Deviation may indicate adaptation to unforeseen site or economic conditions. Substandard work and materials could indicate contractor fraud or official corruption.
Later 19th-Century Commercial and Residential Deposits

Nineteenth-century maps and City directories show commercial and residential structures within the project site that may have left potentially significant archaeological deposits, including refuse in the form of pit refuse, privies, wharf-side discards, architecture, and localized landfilling. Later 19th-century resources of greatest research interest at present are the potential archaeological remains of a Chinese laundry and several saloons and sailors’ boarding houses. Such remains would be eligible under CRHR Criterion 4 (Information Potential) if they can be meaningfully associated with particular communities and address relevant research questions.

Remains of the Chinese laundry establishment that existed on the project site could reveal information about a population that is underrepresented and misrepresented in the historical record. It could address research questions related to issues such as the layout, materials, and construction methods of the facility; business operations and the communities that it served; the socioeconomic status and region of origin, diet and recreational activities of the occupants; evidence of the presence of women and children; and accommodation to American goods and facilities.

Remains of the saloon and several boarding houses that existed on the project site could reveal information about the lives of sailors and workers on the waterfront and could address research questions related to issues such as the ethnicity, diet, and recreation of the sailors; personal possessions; illicit activity (smuggling, prostitution, “shanghaing,” drugs, gambling); and a comparison of the boarding houses within the project site with the deposit found at the Rincon Annex Post Office.

IMPACTS

SIGNIFICANCE THRESHOLDS

CEQA requires that the effects of a project on archaeological resource shall be taken into consideration and that if a project sponsor may affect an archaeological resource that it shall first be determined if the archaeological resource is an “historical resource,” that is, if the archaeological resource meets the criteria for listing in the CRHR. To be eligible for listing to the CRHR under Criteria 1, 2, or 3, an archaeological site must contain artifact assemblages, features, or stratigraphic relationships associated with important events or important people, or be exemplary of a type, period, or method of construction (CEQA Guidelines Sections 15064.5(a)(1) and (3) and Sections 15064.5(c)(1) and (2)). To be eligible under Criterion 4, an archaeological site need only show the potential to yield important information. An archaeological resource that qualifies as a “historical resource” under CEQA, generally, qualifies for listing under Criterion 4 of the CRHR (CEQA Guidelines Section 15064.5(a)(3)(D)). An archaeological resource may qualify for listing under Criterion 4 when it can be demonstrated that the resource has the
potential to significantly contribute to questions of scientific/historical importance. The research value of an archaeological resource can only be evaluated within the context of the historical background of the site of the resource and within the context of prior archaeological research related to the property type represented by the archaeological resource.

Accordingly, implementation of the proposed project could have a potentially significant impact related to archaeological resources if the project were to:

- Cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines Section 15064.5.

**METHODOLOGY**

An archaeological research design and treatment plan (ARDTP) was prepared for a previous version of the project. The ARDTP has been updated to address the currently proposed project.\(^5\) The research and recommendations of the ARDTP are the basis for the analysis and conclusions of this EIR. In order to assess the likelihood of encountering archaeological resources within the project site, and predict the archaeological property types that may exist within the project site, the ARDTP reviews the historical context of San Francisco’s waterfront at the project site. The ARDTP also presents relevant archaeological research themes, questions, and data requirements to evaluate the integrity and significance of cultural deposits that may be encountered, and provides recommendations for their recovery, study, treatment and disposition.

**IMPACT EVALUATION**

The proposed buildings would have a pile foundation system supporting a thick mat. The estimated depth of proposed excavation would be as much as 38 feet below the ground at the site of the proposed residential buildings (with excavation of as much as about 40 feet deep for elevator pits), and 2 feet to 4 feet beneath the tennis courts and proposed athletic club building north of Jackson Street. Pile driving would be required; pile lengths would average about 130 feet. Approximately 110,000 cubic yards of soil would be removed from the project site.

The project site is expected to contain legally-significant archaeological resources. Construction activities (excavation, grading, pile driving) could disturb significant archaeological resources. Impacts on these resources are described below, followed by an evaluation of the significance of the impact without mitigation, and an evaluation of the significance of the impact with mitigation.

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Impact CP-1: Project construction activities would have the potential to disturb the remains of the Bethel (and possibly other scuttled Gold Rush era ships). (Less than Significant with Mitigation)

Construction activities within or near the area along the north side of the Jackson Street alignment and The Embarcadero may disturb remains of the scuttled ship Bethel. This feature may be considered significant under all four CRHR criteria: Criterion 1 (Events), Criterion 2 (Persons), Criterion 3 (Design/Construction), and Criterion 4 (Information Potential).

Disturbance or removal of this feature could materially impair the physical characteristics of the resource that convey its association with 19th century trade, waterfront development during the Gold Rush, and the notorious waterfront speculator Frederick Lawson. It would also impair the ability of the resource to embody, and yield important information about, distinctive characteristics of 19th century ship design and construction. These effects would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

Mitigation Measure M-CP-1a calls for a qualified archaeological consultant to prepare and submit a plan for pre-construction archaeological testing, construction monitoring, and data recovery, for approval by the Environmental Review Officer (ERO). Implementation of the approved plan for testing, monitoring, and data recovery under Mitigation Measure M-CP-1a would ensure that the significance of this resource type, if present within the project site, under CRHR Criterion 4 (Information Potential) would be preserved and/or realized.

To the extent that the potential significance of this resource type, if present within the project site, may be premised on its significance under CRHR Criteria 1 (Events), 2 (Persons), and/or 3 (Design/Construction), Mitigation Measure M-CP-1b calls for a qualified archaeological consultant to prepare and submit a plan for post-recovery interpretation of resources. Implementation of an approved program of interpretation under Mitigation Measure M-CP-1b would preserve and enhance the ability of this resource to convey its significance under CRHR Criterion 1 (Events), Criterion 2 (Persons), and Criterion 3 (Design/Construction).

With implementation of Mitigation Measures M-CP-1a and M-CP-1b, the proposed project would not cause a substantial adverse change to the significance of this archaeological resource type, if present within the project site.

Mitigation Measure M-CP-1a: Archaeological Testing, Monitoring and Data Recovery and Reporting

Based on the archaeological identification efforts undertaken, it is clearly known that archaeological resources are present within the project site. The following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried
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or submerged historical resources. The project sponsor shall retain the services of an
archaeological consultant from the pool of qualified archaeological consultants maintained by the
Planning Department archaeologist. The archaeological consultant shall undertake an
archaeological testing program as specified herein. In addition, the consultant shall be available
to conduct an archaeological monitoring and/or data recovery program if required pursuant to this
measure. The archaeologist consultant’s work shall be conducted in accordance with this
measure and with the requirements of the project archeological research design and treatment
plan (Archeo-Tec, Archaeological Research Design/Treatment Plan for the 8 Washington Street
Project, January 2003; and Addendum Archaeological Research Design and Treatment Plan for
the 8 Washington Street Project, February 2011) at the direction of the ERO. In instances of
inconsistency between the requirement of the project archeological research design and treatment
plan and of this archeological mitigation measure, the requirement of this archeological
mitigation measure shall prevail. All plans and reports prepared by the consultant as specified
herein shall be submitted first and directly to the ERO for review and comment, and shall be
considered draft reports subject to revision until final approval by the ERO. Implementation of
the archaeological identification, evaluation, and data recovery requirements of this measure and
of the project archeological research design and treatment plans (2003, 2011) would reduce to a
less-than-significant level potential effects on a significant archaeological resource as defined in
CEQA Guidelines Section 15064.5 (a) and (c).

Archaeological Testing Program

The archaeological consultant shall prepare and submit to the ERO for review and approval an
archaeological testing plan (ATP) taking into account the ARDTP and Addendum to the ARDTP.
The archaeological testing program shall be conducted in accordance with the approved ATP.
The ATP shall identify the property types of the expected archaeological resource(s) that
potentially could be adversely affected by the proposed project, the testing method to be used,
and the locations recommended for testing. The purpose of the archaeological testing program
will be to determine to the extent possible the presence or absence of archaeological resources
and to identify and to evaluate whether any archaeological resource encountered on the site
constitutes an historical resource under CEQA.

At the completion of the archaeological testing program, the archaeological consultant shall
submit a written report of the findings to the ERO. If based on the archaeological testing program
the archaeological consultant finds that significant archaeological resources may be present, the
ERO in consultation with the archaeological consultant shall determine if additional measures are
warranted. Additional measures that may be undertaken include additional archaeological testing,
archaeological monitoring, and/or an archaeological data recovery program. If the ERO
determines that a significant archaeological resource is present and that the resource could be
adversely affected by the proposed project, at the discretion of the project sponsor either:
A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or

B) A data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archaeological Monitoring Program (AMP)

If the ERO in consultation with the archaeological consultant determines that an archaeological monitoring program shall be implemented, the archaeological monitoring program shall minimally include the following provisions:

- The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils-disturbing activities commencing. The ERO in consultation with the archaeological consultant shall determine what project activities shall be archaeologically monitored. In most cases, any soils-disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archaeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;

- The archaeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archaeological resource;

- The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the project archaeological consultant, determined that project construction activities could have no effects on significant archaeological deposits;

- The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;

- If an intact archaeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile-driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile-driving activity may affect an archaeological resource, the pile-driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO.
Archaeological Data Recovery Program

The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archaeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- **Field Methods and Procedures.** Descriptions of proposed field strategies, procedures, and operations.
- **Cataloguing and Laboratory Analysis.** Description of selected cataloguing system and artifact analysis procedures.
- **Discard and Deaccession Policy.** Description of and rationale for field and post-field discard and deaccession policies.
- **Interpretive Program.** Consideration of an on-site/off-site public interpretive program during the course of the archaeological data recovery program.
- **Security Measures.** Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities.
- **Final Report.** Description of proposed report format and distribution of results.
- **Curation.** Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects

The treatment of human remains and of associated or unassociated funerary objects discovered during any soils-disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner’s determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archaeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated
funerary objects (CEQA Guidelines Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archaeological Resources Report

The archaeological consultant shall submit a Draft Final Archaeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archaeological resource and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound copy, one unbound copy and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Implementation of the approved plan for testing, monitoring, and data recovery under Mitigation Measure M-CP-1a would ensure that the information potential of archaeological resources that may be encountered during construction of the project would be preserved and/or realized. With this mitigation, the proposed project would not have a significant impact on archaeological resources.

Mitigation Measure M-CP-1b: Interpretation

Based on a reasonable presumption that archaeological resources may be present within the project site, and that the potential significance of some such resources may be may be premised on CRHR Criteria 1 (Events), 2 (Persons), and/or 3 (Design/Construction), the following measure shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources.

The project sponsor shall implement an approved program for interpretation of resources. The project sponsor shall retain the services of a qualified archaeological consultant having expertise in California urban historical and marine archaeology. The archaeological consultant shall develop a feasible, resource-specific program for post-recovery interpretation of resources. The
particular program for interpretation of artifacts that are encountered within the project site will depend upon the results of the data recovery program and will be the subject of continued discussion between the ERO, consulting archaeologist, and the project sponsor. Such a program may include, but is not limited to, any of the following (as outlined in the ARDTP): surface commemoration of the original location of resources; display of resources and associated artifacts (which may offer an underground view to the public); display of interpretive materials such as graphics, photographs, video, models, and public art; and academic and popular publication of the results of the data recovery.

The archaeological consultant’s work shall be conducted at the direction of the ERO, and in consultation with the project sponsor. All plans and recommendations for interpretation by the consultant shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO.

**Impact CP-2: Project construction activities would have the potential to disturb the remains of wharf structures. (Less than Significant with Mitigation)**

Construction activities within or near the current alignments of Jackson and Pacific Streets may disturb remains of the Jackson and Pacific wharves. As some of the last physical remnants of the Gold Rush era landscape, these features would be considered significant under CRHR Criterion 1 (Events) and under Criterion 4 (Information Potential).

Removal or damage of these features could impair the physical characteristics of the resource that convey their association with the Gold Rush and would impair the potential of these features to yield important historic information. These effects would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

With implementation of Mitigation Measures M-CP-1a and M-CP-1b, the proposed project would not cause a substantial adverse change to the significance of this archaeological resource type, if present within the project site.

**Impact CP-3: Project construction activities would have the potential to disturb the remains of wharf-side discards. (Less than Significant with Mitigation)**

Construction activities within or near the current alignments of Jackson and Pacific Streets may disturb remains of Gold Rush era wharf-side discards along the Jackson and Pacific wharves. If still present, these features may be considered significant under CRHR Criterion 4 (Information Potential). Disturbance of these features could materially impair the potential of these features to yield important historic information. This effect would be considered a substantial adverse change in the significance of an archaeological resource and would therefore be a potentially significant impact under CEQA.
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With implementation of Mitigation Measures M-CP-1a, and M-CP-1b, the proposed project would not cause a substantial adverse change to the significance of this archaeological resource type, if present within the project site.

Impact CP-4: Project construction activities would disturb the remains of the Old Seawall. (Less than Significant with Mitigation)

Construction activities within or near Seawall Lot 351 would require complete removal of an approximately 440-foot-long segment of the Old Seawall running through the project site. The Old Seawall is significant under Criterion 1 (Events). The Old Seawall may also be considered potentially significant under Criterion 4 (Information Potential) if its actual construction deviates from the BSHC’s detailed specifications.

The proposed project would cause the largest disturbance of the Old Seawall to date. Previous projects with documented impacts on the Old Seawall include the Muni Metro Turnback Project and the San Francisco Clean Water Project. Future potential development of the Port of San Francisco’s Seawall Lots 320 and 321 at Union Street and The Embarcadero would also impact the Old Seawall. Removal of the segment of the Old Seawall that runs through the project site would diminish the overall integrity of the Old Seawall resource. Since most of this linear feature (running from Union Street to Mission Street) would continue to remain intact, this effect would not materially impair the ability of the resource to convey its association with 19th century waterfront infrastructure development under CRHR Criterion 1 (Events). However, if the actual construction of this segment of seawall underlying Seawall 351 deviates from the detailed BSHC’s specifications, removal of this segment would materially impair the ability of this segment to yield information about the actual construction of the Old Seawall that is not available in the historic record. This effect would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

With implementation of Mitigation Measures M-CP-1a and M-CP-1b, the proposed project would not cause a substantial adverse change to the significance of this archaeological resource type, if present within the project site.

Impact CP-5: Project construction activities would have the potential to disturb the remains of 19th century commercial and residential deposits. (Less than Significant with Mitigation)

Construction activities may disturb and remove artifacts associated with the Chinese laundry, saloons, and boarding houses that are known to have existed on the project site. If still present, these features may be considered significant under CRHR Criterion 4 (Information Potential).
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Disturbance of these features would materially impair the potential of these features to yield historic information about the Chinese population in San Francisco, the lives of sailors and waterfront workers, and waterfront businesses and activities. This effect would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

Mitigation Measure M-CP-1 calls for a qualified archaeological consultant to prepare and submit a plan for pre-construction archaeological testing, construction monitoring, and data recovery, for approval by the ERO. Implementation of the approved plan for testing, monitoring, and data recovery under Mitigation Measure M-CP-1 would ensure that the significance of the resource under CRHR Criterion 4 (Information Potential) would be preserved and/or realized.

With implementation of Mitigation Measures M-CP-1a and M-CP-1b, the proposed project would not cause a substantial adverse change to the significance of this archaeological resource type, if present within the project site.

Impact CP-6: Project construction activities would have the potential to disturb unknown remains. (Less than Significant with Mitigation)

Construction activities may disturb unknown remains within the project site area. This feature may be considered significant under all four CRHR criteria: Criterion 1 (Events), Criterion 2 (Persons), Criterion 3 (Design/Construction), and Criterion 4 (Information Potential).

Disturbance or removal of unknown remains could materially impair the physical characteristics of the unknown resource. These effects would be considered a substantial adverse change in the significance of an historical resource and would therefore be a potentially significant impact under CEQA.

Mitigation Measure M-CP-6 is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a)(c). Mitigation Measure M-CP-6 requires that the project sponsor distribute an “Alert Sheet” to inform all field and construction personnel of the potential presence of archaeological resources within the project site and the procedures in the event such resources are encountered during construction activities. This measure calls for immediate suspension of soils disturbing activity, and notification of the ERO to determine what additional measures should be undertaken. The ERO may require that an archeological consultant be retained to evaluate the resource and make recommendations. The ERO may require specific additional measures to be implemented by the project sponsor. Implementation of Mitigation Measure M-CP-6 would ensure that the significance of archeological resources, if present within the project site, would be preserved in the event such resources are accidentally encountered during demolition and groundwork activities.
Mitigation Measure M-CP-6: Accidental Discovery

The following mitigation measure is required to avoid any potential adverse effect from the proposed project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a) and (c). The project sponsor shall distribute the Planning Department archeological resource “ALERT” sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken, each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet.

Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO has determined what additional measures should be undertaken.

If the ERO determines that an archeological resource may be present within the project site, the project sponsor shall retain the services of an archeological consultant from the pool of qualified archeological consultants maintained by the Planning Department archaeologist. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource.

Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions.

The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.
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Copies of the Draft FARR shall be sent to the ERO for review and approval. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The EP division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.

**Impact CP-7:** Project construction activities would have the potential to contribute to cumulative impacts related to Archaeological Resources. *(Less than Significant with Mitigation)*

When considered with past, present, and foreseeable future development projects along and near the San Francisco waterfront, the disturbance of archaeological resources within the project site could contribute to a cumulative loss in the ability of the San Francisco’s waterfront to convey its association with historic events and persons, to embody distinctive characteristics of design and construction, and to yield significant historic and scientific information about development of the early San Francisco waterfront, maritime history, and underrepresented populations in the historical record.

Implementation of an approved plan for interpretation and curation would preserve and enhance the ability of archaeological resources significant under CRHR Criterion 1 (Events), Criterion 2 (Persons), and Criterion 3 (Design/Construction) to convey their significance under these criteria. Implementation of an approved plan for testing, monitoring, and data recovery would preserve and realize the information potential of archaeological resources under CRHR Criterion 4 (Information Potential).

The recovery, documentation, and interpretation of information about archaeological resources that may be encountered within the project site would enhance the association between San Francisco’s waterfront and its history. This information would be available to future archaeological studies, contributing to the body of historic and scientific knowledge. With implementation of the mitigation measures for archaeological resources in this section, the proposed project would not contribute to a significant adverse cumulative impact on archaeological resources.
D. TRANSPORTATION AND CIRCULATION

This section summarizes the information presented in the *8 Washington St./SWL 351 Transportation Study* ("Transportation Study"),\(^1\) prepared by an independent transportation consultant, Adavant Consulting, under the direction of the San Francisco Planning Department. The Transportation Study describes existing and future (2035) transportation conditions (roadway traffic, transit, pedestrian, bicycle, parking, and loading) in the vicinity of the proposed project and evaluates its environmental effects.

SETTING

TRANSPORTATION STUDY AREA

The proposed project would be located in the triangle created by Drumm and Washington Streets and The Embarcadero. The entrance to the proposed parking garage on the project site would be from Washington Street, near Drumm Street. There would be three loading docks and a trash bay mid-building on the Drumm Street side.

The transportation study area includes the area roughly bounded by Market, Battery, and Broadway Streets, and The Embarcadero. Washington, Jackson, and Drumm Streets and The Embarcadero are adjacent to the project site. (See Figure IV.D-1: Transportation Study Area and Intersection Analysis Locations.) The transit study area includes local and regional transit service near the project site, including transit service at The Embarcadero and at Market and California Streets. The boundaries of the parking study area are Broadway to the north, Market and California Streets to the south, Battery Street to the east, and the San Francisco Bay to the west.

ROADWAY NETWORK

Regional Freeways

The project site is served by Interstate 80 (I-80), U.S. Highway 101 (U.S. 101), and Interstate 280 (I-280). Regional access to and from the project site and the East Bay is provided by I-80 and the San Francisco-Oakland Bay Bridge. The closest access points to I-80 are the First Street on-ramp and the Fourth Street/Bryant Street off-ramp. U.S. 101 and I-280 provide regional access to and from the Peninsula and the South Bay and have an interchange south of downtown San Francisco.

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1 Adavant Consulting, *8 Washington St./SWL 351 Transportation Study Final Report*, May 25, 2011. A copy of this report is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.
The closest access to southbound U.S. 101 is from the I-80 on-ramps at Fourth Street/Harrison Street. I-280 has nearby on- and off-ramps at Sixth Street/Brannan Street and Fifth Street/King Street. Regional access to the North Bay is provided by U.S. 101, which extends north via Van Ness Avenue and Lombard Street to the Golden Gate Bridge. Van Ness Avenue serves as U.S. 101 between Market Street and Lombard Street.

Local Streets

The north-south roadways serving the project site are The Embarcadero and Drumm Street, and the east-west roadways are Jackson, Washington, and Broadway Streets.

The Embarcadero is a two-way north-south roadway that runs between Second Street (in the South Beach area near AT&T Park) and Taylor Street (near Fisherman's Wharf). It generally has two or three travel lanes each way, with a wide center median for the F-Market & Wharves streetcar (north of Mission Street), and T-Third and N-Judah light rail lines (south of Howard Street). In the vicinity of the project site, The Embarcadero has three northbound travel lanes and one bicycle lane, plus two southbound travel lanes and one bicycle lane (an additional southbound tow-away lane is provided on weekdays during the morning and evening commuter peak traffic periods).

Drumm Street is a north-south roadway that connects Jackson and Market Streets. Between Market and Washington Streets, Drumm Street has two lanes, each way with a raised planted median; between Washington and Jackson Streets, the street narrows to one lane, each way without a median. In the vicinity of the project site, 2-hour metered on-street parking, yellow loading spaces, and motorcycle parking spaces are provided on both sides of the street. The San Francisco General Plan (General Plan) identifies Drumm Street as a Major Arterial in the Congestion Management Network and a Transit Preferential Street between Jackson and Market Streets, and a Neighborhood Pedestrian Street between Sacramento and Market Streets.

Jackson Street is a two-way east-west roadway that connects Arguello Boulevard and Drumm Street. It operates one way eastbound between Powell and Front Streets and two way (one lane each way) between Front and Drumm Streets. One-hour metered on-street parking and yellow loading spaces are provided on both sides of the street in the vicinity of the project site.

Washington Street is an east-west roadway that connects The Embarcadero with Arguello Boulevard. Washington Street operates two way between The Embarcadero and Drumm Street, one way westbound between Drumm and Powell Streets, one way eastbound between Powell and Gough Streets, and two way between Gough Street and Arguello Boulevard. Between Drumm Street and The Embarcadero, Washington Street has two lanes, each way separated by an approximately 11-foot-wide planted median and metered 2-hour parking on both sides. The General Plan identifies Washington Street as a Major Arterial in the Congestion Management Network.
Network between Kearny Street and The Embarcadero. It is a Transit Preferential Street between Hyde and Mason Streets, and a Neighborhood Pedestrian Street between Fillmore and Mason Streets.

In the vicinity of the project site, between Broadway and Mission Street, 4-hour metered on-street parking is permitted on the west side of the street during non-commute periods. On-street parking is prohibited between 7 and 9 AM and between 3 and 6 PM on weekdays. Along the east side of the street, 2-hour metered on-street parking is allowed between Washington Street and Broadway. The General Plan identifies The Embarcadero as a Major Arterial in the Congestion Management Network, a Transit Preferential Street, a Neighborhood Pedestrian Street, and a Citywide Bicycle Route (#5). In addition, The Embarcadero is designated as part of the Bay, Ridge, and Coast Trail, which is a recreational pedestrian/bicycle path connecting several Bay Area cities.

Broadway is an east-west roadway that runs between The Embarcadero and Lyon Street (near the Presidio). In the vicinity of the project site, Broadway has two lanes each way, with 1-hour on-street metered parking generally provided on both sides of the street. The General Plan identifies Broadway as a Major Arterial in the Congestion Management Network and a Metropolitan Transportation System Street between The Embarcadero and Franklin Street, a Neighborhood Pedestrian Street between The Embarcadero and Powell Street, and part of the Citywide Bicycle Route (#10).

**INTERSECTION OPERATING CONDITIONS**

**Methodology**

The operations of roadway facilities are described with the term “Level of Service” (LOS). LOS is a qualitative description of traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. LOS ranges from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. Typically, LOS E and LOS F represent unacceptable Levels of Service. In San Francisco, LOS A through D are considered excellent to satisfactory service levels, and LOS E and F represent unacceptable service levels.
Existing Conditions

Existing traffic was evaluated for the weekday PM peak hour within the PM peak commute period (4:00 to 6:00 PM), using intersection turning movement counts collected at the study intersections on May 30, 2007. The PM peak commute period was selected as the basis for the analysis since it normally represents the time of maximum utilization of the transportation system in San Francisco. Furthermore, given the proposed uses of the Project, its travel demand would be higher during the PM peak period than during the AM peak commute period.

The intersections analyzed included The Embarcadero and Broadway; The Embarcadero and Washington Street; Drumm and Washington Streets; Drumm, Main, and Market Streets; Davis and Jackson Streets; and Jackson and Drumm Streets. These are all intersections in close proximity to the Proposed Project, and which capture the possible paths of travel to the site. All of the study intersections are controlled by traffic signals except the one at Davis and Jackson Streets, which is controlled by a four-way stop, and the corner at Jackson and Drumm Streets, where no controls are necessary because there is no “intersection” allowing vehicles to choose other options.

Table IV.D-1 presents the results of the intersection LOS analysis for the existing weekday PM peak hour conditions. The study intersections were evaluated using the 2000 Highway Capacity Manual (HCM) methodology. Existing intersection operating conditions were evaluated for the peak hour (generally 5:00 PM to 6:00 PM) of the weekday PM peak period (4:00 PM to 6:00 PM). Intersection turning movement counts were conducted at all study intersections on Wednesday, September 19, 2007.

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2 As noted in the Transportation Study, p. 19, traffic counts conducted on The Embarcadero within the past year for a transportation study at Piers 27/29 (James R. Herman Cruise Terminal project) indicate that recent traffic volumes are lower than those observed in 2007.
3 Vehicles approaching the intersection of Jackson and Drumm Streets do not have any choice at the intersection (e.g., going north on Drumm, a driver must turn left onto Jackson, as neither street continues to the north or east).
4 As part of the HCM methodology, adjustments are typically made to the capacity of each intersection to account for various factors that reduce the ability of the streets to accommodate vehicles (such as the downtown nature of the area, number of pedestrians, vehicle types, lane widths, grades, on-street parking and queues). These adjustments are performed to ensure that the LOS analysis results reflect the operating conditions that are observed in the field.
Table IV.D-1: Intersection LOS – Existing Conditions

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Traffic Control</th>
<th>Existing Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Embarcadero/Broadway</td>
<td>Signalized</td>
<td>D</td>
</tr>
<tr>
<td>2. Embarcadero/Washington</td>
<td>Signalized</td>
<td>D</td>
</tr>
<tr>
<td>3. Drumm Street/Washington Street</td>
<td>Signalized</td>
<td>B</td>
</tr>
<tr>
<td>4. Drumm/Main/Market Streets</td>
<td>Signalized</td>
<td>B</td>
</tr>
<tr>
<td>5. Davis Street/Jackson Street</td>
<td>Four-way Stop</td>
<td>B**(WB)**</td>
</tr>
</tbody>
</table>

Notes: Delay in seconds per vehicle.

a There is no intersection where Drumm and Jackson Streets meet.
b Delay is presented in seconds per vehicle.
c For unsignalized intersections, delay is presented for the worst stop-controlled approach. Here, that approach is west bound, or “WB.”


Currently, all study intersections operate with acceptable conditions (LOS D or better) during the weekday PM peak hour.

**TRANSIT**

The project site is well served by transit, with both local and regional service provided near the project site (see Figure IV.D-2: Nearby Transit Service). Local service is provided by San Francisco Municipal Railway (Muni) bus, light rail, streetcar, and cable car lines. Muni operates 5 transit lines in the vicinity of the project site, with substantial additional service on Market Street, three blocks away. Service to and from the East Bay is provided by BART, Alameda-Contra Costa Transit District (AC Transit), the Alameda-Oakland Ferry, the Alameda Harbor Bay Ferry, and the Vallejo Baylink ferry; service to and from the North Bay is provided by Golden Gate Transit buses and ferries; service to and from the peninsula and the South Bay is provided by Caltrain, San Mateo County Transit District (SamTrans), and BART.

**Local Transit Service**

San Francisco Municipal Railway (Muni) provides transit service within the City and County of San Francisco, including bus (both diesel and electric), light rail (Muni Metro), cable car, and electric streetcar lines. Muni operates five lines in the nearby vicinity of the project site; the 1-California, the 10-Townsend, 12-Folsom/Pacific, and 41-Union bus lines, and the F-Market & Wharves historic streetcar line. Muni’s F-Market line runs on a mixed-traffic lane on Market Street and on a semi-exclusive median along The Embarcadero.
FIGURE IV.D-2: NEARBY TRANSIT SERVICE
The 1-California trolley bus line has an inbound stop at the southwest corner of Drumm and Clay Streets and an outbound stop at the northeast corner of Davis and Sacramento Streets. The 41-Union trolley bus line also stops at the northeast corner of Davis and Sacramento Streets in the outbound direction. The 10-Townsend and the 12-Folsom/Pacific lines have stops along Battery (outbound) and Sansome (inbound) Streets, near Jackson and Washington Streets.

The Muni F-Market & Wharves line runs on a mixed-traffic lane on Market Street and on a semi-exclusive median along The Embarcadero. It serves Pier 39, Pier 41, and Fisherman’s Wharf to the north of the project site, and the Ferry Terminal, Market Street, and BART/Muni metro stations to the south of the project site. There is one Muni F-line streetcar stop directly in front of the project site. The northbound (outbound) stop is located in the median on the north side of the intersections of The Embarcadero/Washington, while the southbound (inbound) stop is located on the south sides of the same intersection. The scheduled headways for the F-Market & Wharves line in the project vicinity during the PM peak hour (4:00 PM to 6:00 PM) is approximately 7 minutes, which provides a total capacity of approximately 700 passengers per hour each way. Muni’s adopted capacity standard is 85 percent of total capacity, or 595 passengers.

Table IV.D-2 summarizes the weekday PM peak hour Muni transit service as of September 2010 in the vicinity of the project site.

### Table IV.D-2: Nearby San Francisco Municipal Railway Service

<table>
<thead>
<tr>
<th>Route</th>
<th>Service Frequency (min.)</th>
<th>Nearest Stop Location (inbound, outbound)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM</td>
<td>Midday</td>
</tr>
<tr>
<td>F-Market &amp; Wharves</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1-California</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>10-Townsend</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>12-Folsom/Pacific</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>41-Union</td>
<td>7</td>
<td>No service</td>
</tr>
</tbody>
</table>

*Source: SFMTA schedules, Adavant Consulting, December 2010.*

Additional Muni service is provided in the area, including the Metro service underneath Market Street (six lines) and the bus turnaround at Market/Steuart/Mission (ten lines). In May 2006, Muni initiated a comprehensive review of its operations with the aim of increasing the effectiveness of the City’s public transit system and transforming it into a more efficient public transit system. The TEP includes proposals for service and street network changes that address issues related to reliability, travel times, and service areas. In August 2008, the San Francisco Municipal Transportation Agency (SFMTA) presented a refined set of proposals known as Staff...
Recommendations. These recommendations were based on feedback provided by SFMTA employees and members of the public, including elected officials, other City agencies, and community groups, over the spring and summer of 2008. The TEP proposals were endorsed for the purposes of environmental review by the SFMTA Board of Directors in October 2008 and SFMTA has implemented some elements as part of the recent actions taken by SFMTA to respond to fiscal emergencies.

The following changes are proposed but not approved by SFMTA in the TEP for lines in the project vicinity:

- A new local route would circulate around downtown (11-Downtown Connector), replacing the 12-Folsom/Pacific in the study area, and also connecting North Beach with the Montgomery BART/Muni Station along Van Ness, Bay, Polk, North Point, Powell, Columbus, Sansome, Second, Folsom/Harrison, and 11th Streets.
- The 10-Townsend would be renamed 10-Sansome, replacing the 12-Folsom/Pacific and operating along Pacific Avenue, Sansome Street, and Second Street.
- A new E-Embarcadero streetcar line would be implemented between the Caltrain Depot at Fourth and Townsend Streets and Fisherman’s Wharf via King Street and The Embarcadero to reduce crowding on the waterfront portion of the F Line.
- Service on the F-Market & Wharves streetcar line would be increased at midday and during the PM peak, and additional service would be shifted from the AM peak to midday and PM peak to reduce crowding during the busiest times of day.

In April 2010, budget shortfalls led to a decision by SFMTA to reduce the frequencies of certain lines in order to reduce the size of the operating deficit. Those reduced frequencies are reflected in the schedules and line routings in the Transportation Study and in Table IV.D.2. Screenline data on the capacity and utilization of individual Muni lines were provided by MEA based on 2007 data collected as part of the TEP study; these data are the most recent available.

Ridership and capacity data were collected by Muni as part of the TEP-established maximum load point (MLP) for each line. The MLP is the location where the route has its highest number of passengers relative to capacity. Muni assigns a maximum capacity estimate to each line based on the seated plus standing capacity of each vehicle type operating on the transit line, and defines a maximum utilization factor to be used for planning purposes, which is 85 percent of the maximum vehicle capacity.

Currently, all the bus lines that operate in the vicinity of the proposed project operate below Muni’s maximum utilization factor (85 percent) and have available capacity at the MLP to accommodate additional passengers. The MLPs of all nearby Muni bus routes, with the

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exception of the 10-Townsend, are outside the vicinity of the Project site. Therefore, there is even
greater capacity on these bus routes within the vicinity of the proposed project than at the MLP.

Regional Transit Service

BART operates regional rail transit service between the East Bay (from Pittsburg/Bay Point,
Richmond, Dublin/Pleasanton and Fremont) and San Francisco, and between San Mateo County
(Millbrae and San Francisco International Airport) and San Francisco. The BART station nearest
the project site is the Embarcadero Station, which has an entrance on the northeast corner of The
Embarcadero/Market Street. In the weekday PM peak hour, the peak hour combined frequencies
at Embarcadero Station are approximately every 5 to 15 minutes for each line.

AC Transit is the primary bus operator for the East Bay, including Alameda and western Contra
Costa Counties. AC Transit operates 27 routes between the East Bay and San Francisco’s
Transbay Terminal, located at First Street/Mission Street, most of which are commute express
services operating during the peak hour in the peak direction.

South Bay

Transit service to and from the South Bay is provided by BART, SamTrans, and Caltrain.
SamTrans provides bus service between San Mateo County and San Francisco. In the weekday
PM peak hour, there are six commute-only expresses operating between downtown San Francisco
and points in San Mateo County, in addition to two local/limited lines and one express line which
operate in both directions. The closest SamTrans stop is the Transbay Temporary Terminal, less
than a mile south of the project site.

Caltrain provides commuter rail passenger service between Santa Clara, San Mateo, and San
Francisco Counties. The closest station to the project site is the main San Francisco terminal at
Fourth Street/Townsend Street, which connects to the project site via the Muni 10-Townsend line,
and via the nearby N-Judah and T-Third lines, which connect the Caltrain station with Market
Street. The Central Subway project, currently in the implementation stage, will provide a further
connection between Caltrain and the Market Street area. In the weekday PM peak period, trains
depart every 6 to 20 minutes, most of which are limited-stop or Baby Bullet express services.

North Bay

Transit service to and from the North Bay is provided by Golden Gate Transit buses and ferries.
In the weekday PM peak hour, Golden Gate Transit operates 17 commute-only expresses, 3 all-
day bus routes which operate in both directions, and ferry services between San Francisco and
Larkspur and Sausalito. In the weekday PM peak hour, bus service is primarily out of San
Francisco, running along Mission Street and Seventh Street, through the Civic Center area, and to
Van Ness Avenue and Geary Boulevard on its way to the Golden Gate Bridge. Additional bus service operates in the Financial District (Sansome Street) and along North Point Street and Lombard Street to reach the bridge. Ferries connecting San Francisco with Larkspur, Sausalito, Tiburon, and Vallejo operate out of the Ferry Building located at The Embarcadero and Market Street. No late night service is provided. The Golden Gate bus stops nearest the project site are located at Sansome/Jackson Streets and Battery/Jackson Streets.

Local and Regional Transit Screenline Analysis

Four screenlines have been established in San Francisco to analyze potential impacts of projects on Muni service: Northeast, Northwest, Southwest, and Southeast, with subcorridors within each screenline. Three regional screenlines have been established around San Francisco to analyze potential impacts on the regional transit agencies: East Bay (BART, AC Transit, ferries), North Bay (Golden Gate Transit buses and ferries), and the South Bay (BART, Caltrain, SamTrans). The screenline analysis focuses on transit trips in the outbound direction, i.e., trips from downtown San Francisco to other parts of the City and the region.

Capacity utilization relates the number of passengers per transit vehicle to the design capacity of the vehicle and is used to determine the amount of available space within each screenline. Muni has adopted a capacity utilization service standard of 85 percent of capacity. This standard includes seating capacity plus a substantial number of standing passengers, with standing passengers representing somewhere between 30 to 80 percent of seated passengers, depending upon the specific transit vehicle configuration. All of the regional transit agencies except BART have a 1-hour load factor standard of 100 percent, which indicates that all seats are full. BART has a 1-hour load factor standard of 135 percent, which indicates that all seats are full and an additional 35 percent of the capacity is standing passengers, i.e., 1.35 passengers per seat.

All Muni screenlines and subcorridors are currently operating below the capacity utilization service standard and can accommodate additional passengers, although the subway lines component of the Southwest screenline is at 87 percent, which is above the service standard. All regional transit providers operate at less than their load factor standards, indicating that seats are generally available.

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6 The concept of screenlines is used to describe the magnitude of travel to or from the greater downtown area, and to compare estimated transit volumes to available capacities. Screenlines are hypothetical lines that would be crossed by persons traveling between downtown and its vicinity and other parts of San Francisco and the region.
PEDESTRIANS

Similar to roadway facilities, sidewalk operations are described in terms of LOS. Pedestrian LOS was calculated, including the flow rate of pedestrians and the effective walkway width. Pedestrian counts were conducted on a Wednesday in May 2007 at the PM peak period of 4 to 6 PM.

In the vicinity of the project site, sidewalks on Washington Street are 8 to 10 feet wide, 10 feet wide on Drumm Street, and 10 to 15 feet wide on The Embarcadero adjacent to the project site. In general, pedestrian volumes are moderate in the vicinity of the proposed project, with most pedestrians during the PM peak hour heading towards The Embarcadero, the Ferry Building, or south on Drumm Street to other transit facilities on or near Market Street.

All study crosswalks operate at acceptable conditions (LOS A). Under these conditions, pedestrians are able to move freely, generally without conflicts.

BICYCLES

In the vicinity of the project site, there are three major Citywide Bicycle Routes (Routes #5, 10, and 11). These routes are interconnected to the Citywide Bicycle Network and provide access between the study area and other locations within the City. Route #5 runs on The Embarcadero and is a Class II facility (on-street bicycle lanes) north of Mission Street. Route #10 runs on Broadway and is a Class III facility (signed route only). Route #11 runs on the Clay-Battery/Sansome-Washington one-way couplet and is a Class III facility. A fourth major bicycle route nearby is Route #50 on Market Street (connecting to The Embarcadero via Steuart and Mission Streets), which is a Class III facility from Steuart to 8th Streets and a Class II facility between 8th and 17th Streets. The City has adopted a Bicycle Plan that identifies a number of improvement projects for bicycles, but none of the improvements identified for implementation in the short term are located in the project vicinity.

In general, during both the weekday midday and evening periods, bicycle conditions were observed to be operating at acceptable levels, with only minor conflicts between bicyclists, pedestrians, and vehicles. Bicycle counts were conducted on Wednesday, May 30, 2007, between 4 and 6 PM along The Embarcadero and Washington Street. Approximately 44 bicycles were headed southbound on The Embarcadero between Broadway and Washington during the weekday peak hour, with 6 traveling westbound and 5 eastbound on Washington Street.
Parking

The existing parking conditions were examined within a parking study area generally bounded by Broadway to the north, Battery Street to the west, California Street to the south, and The Embarcadero to the east.

Off-Street Parking

Figure IV.D-3: Parking Key Map, presents the location of the publicly available off-street parking facilities in the study area, and Table IV.D-3 presents the off-street parking supply and occupancy for the facilities. The existing weekday off-street parking supply and occupancy was based on surveys conducted in September 2006 and September 2007 for the midday (between 1 and 3 PM) and the evening (between 6:30 and 8 PM) peak period conditions. Since the 2006-2007 surveys were conducted, the Port closed the facility at Pier ½. This closure is reflected in the parking supply as shown in Figure IV.D-3. The remaining parking supply remains substantially unchanged from those surveys.

Within the parking study area, there are 10 off-street public parking facilities, containing approximately 4,170 self-park plus attendant spaces. Overall, midday parking occupancy in the study area is almost 90 percent, while evening parking occupancy is approximately 50 percent. A number of the facilities currently operate at or above 90 percent occupancy during the weekday midday peak hour, and one third of the available parking supply is located at the Golden Gateway garage at 250 Clay Street.

On-Street Parking

The existing on-street parking conditions in the study area were assessed during the weekday midday peak and the evening periods. In general, on-street parking in the study area consists of metered parking and loading spaces under the City and the Port of San Francisco jurisdictions.

In May 2009 the Port installed new parking meters for the on-street parking spaces on The Embarcadero, which are under its jurisdiction. The new meters allow parkers to park for longer periods with both credit cards and coins. The spaces on The Embarcadero in the vicinity of the project have a 4-hour time limit and operate from 7 AM to 11 PM seven days a week. Parking spaces on Drumm Street and Washington Street near the project site are under the City’s jurisdiction, have a 2-hour limit, and operate from 7 AM to 6 PM Monday through Saturday.

There are a total of 39 2-hour metered parking spaces along the three street sides adjacent to the project site, 16 on The Embarcadero’s west side, 10 on the north side of Washington Street, and 13 on the east side of Drumm Street. Metered spaces on Drumm Street across from the project site include a yellow loading zone.
Table IV.D-3: Off-Street Parking Supply and Occupancy, Existing Conditions – Weekday Midday and Evening Periods

<table>
<thead>
<tr>
<th>Facility</th>
<th>Parking Supply</th>
<th>Midday Occupancy Rate</th>
<th>Evening Occupancy Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 750 Battery Streeta</td>
<td>80</td>
<td>90%</td>
<td>-</td>
</tr>
<tr>
<td>2 GG Commons III (750 Front)</td>
<td>300</td>
<td>93%</td>
<td>-</td>
</tr>
<tr>
<td>3 Sea Wall Lot 351b</td>
<td>105</td>
<td>99%</td>
<td>-</td>
</tr>
<tr>
<td>4 Pier 3a</td>
<td>120</td>
<td>93%</td>
<td>80%</td>
</tr>
<tr>
<td>5 Golden Gateway (250 Clay)</td>
<td>1,343</td>
<td>89%</td>
<td>54%</td>
</tr>
<tr>
<td>6 Embarcadero Center 1</td>
<td>550</td>
<td>85%</td>
<td>34%</td>
</tr>
<tr>
<td>7 Embarcadero Center 2</td>
<td>650</td>
<td>92%</td>
<td>38%</td>
</tr>
<tr>
<td>8 Embarcadero Center 3</td>
<td>650</td>
<td>86%</td>
<td>46%</td>
</tr>
<tr>
<td>9 Embarcadero Center 4a, b</td>
<td>220</td>
<td>85%</td>
<td>63%</td>
</tr>
<tr>
<td>10 Pier ½ a, c</td>
<td>72</td>
<td>72%</td>
<td>96%</td>
</tr>
<tr>
<td>11 50 California Streeta</td>
<td>155</td>
<td>93%</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>4,245</td>
<td>88%</td>
<td>48%</td>
</tr>
<tr>
<td>Total with Closure of Pier ½</td>
<td>4,173</td>
<td>89%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Notes:
- Parking occupancy percentage for midday (1:30 to 3 PM) is based on attendant operations during weekdays (105 spaces). Evening parking occupancy percentage is based on self-park capacity (77 spaces).
- Supply represents publicly available spaces. Portion of garage reserved for Hyatt Hotel guests and visitors.
- Pier ½ lot closed on July 3, 2008 when structural deficiencies were identified by the Port of San Francisco.
- Closes at 7 PM.
- Closes at 8 PM.


In response to the closure of Pier 1/2 in July 2008, Port and City Staff added 11 metered spaces in December 2008 on the west side of Davis Street, between Washington and Clay Streets, one block away from the proposed project. These spaces are reserved for Muni buses between 3 and 6 PM, Monday through Friday.

Approximately 40 parking meters are located along Washington Street, between The Embarcadero and Davis Street, Clay Street, between Davis and Drumm Streets, and Drumm Street, between Sacramento and Washington Streets, are bagged and reserved for Ferry Plaza Farmers Market sellers on Tuesdays and Saturdays from 6 AM to 4 PM.

Tow-away regulations are in effect along The Embarcadero southbound, from Broadway to Mission Street, Monday through Friday from 7 to 9 AM and 3 to 6 PM. Tow-Away regulations (except for buses) are also in effect on the west side of Davis Street, between Washington and Clay Streets on weekdays from 3 to 6 PM. Street cleaning regulations on the streets in the vicinity of the proposed project include tow-away in effect from 2 to 6 AM on Tuesdays and Thursdays on one side of Vallejo, Jackson, Front, and Davis Streets; Monday, Wednesday, Friday on the other side of the same streets; and Monday through Friday on Pacific Street only. There are no neighborhood residential parking restrictions in the vicinity of the proposed project.
Midday on-street peak parking occupancy in the study area is approximately 88 percent, while weekday evening on-street parking occupancy, which includes non-metered (e.g. free parking time), stands at 88 to 98 percent.

An on-street parking study conducted for the Port in March 2007 at metered spaces located on the 200 block of The Embarcadero, in the vicinity of the Ferry Building, indicated an average turnover of 4.6 vehicles per space. Approximately 40 percent of the vehicles stay 2 hours or less, 25 percent of the vehicles stay between 2 and 4 hours, and 35 percent stay over 4 hours. About 40 percent of the usage at these meters was for paid parking, 20 percent was for vehicles displaying disabled placards, and 10 percent was unpaid, with no placard. The remaining 30 percent of the usage was during non-metered (free) time periods.

REGULATORY FRAMEWORK

San Francisco General Plan

The Transportation Element of the San Francisco General Plan is composed of objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management. The Transportation Element references San Francisco’s “Transit First” Policy in its introduction, and contains objectives and policies that support such Policy.

Transit First Policy

In 1998, the San Francisco voters amended the City Charter (Charter Article 8A, Section 8A.115) to include a Transit-First Policy, which was first articulated as a City priority policy by the Board of Supervisors in 1973. The Transit-First Policy is a set of principles which underscore the City’s commitment that travel by transit, bicycle, and foot be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required, by law, to implement transit-first principles in conducting City affairs.

IMPACTS

This section presents the assessment of transportation impacts due to the travel demand generated by the proposed project. The impacts are presented for two scenarios: Existing plus Project Conditions and 2035 Cumulative Conditions, and are grouped into seven areas:

- Traffic,
- Transit,
- Pedestrians,
- Bicycles,
SIGNIFICANCE THRESHOLDS

The following significance criteria for each of the seven transportation areas are used by the San Francisco Planning Department to determine the significance of transportation impacts associated with a proposed project.

Traffic: Intersection Level of Service

The operational impact on signalized intersections is considered significant when project-related traffic causes the intersection Level of Service to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F. The operational impacts on unsignalized intersections are considered potentially significant under either of two conditions: (1) project-related traffic would cause the Level of Service at the worst approach to deteriorate from LOS D or better to LOS E or LOS F and signal warrants would be met; or (2) project-related traffic would cause signal warrants to be met when the worst approach is already operating at LOS E or LOS F.

A proposed project may result in significant adverse traffic circulation impacts at intersections that already operate at LOS E or LOS F under existing conditions depending upon the magnitude of the proposed project’s contribution to the worsening of the average delay per vehicle. In addition, a proposed project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in Levels of Service to unacceptable levels.

Transit

A proposed project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by nearby transit lines, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs so that significant, adverse impacts on transit service levels could result. With the Muni and regional transit screenlines analyses, a proposed project would have a significant effect on the transit provider if project-related transit rider trips would cause the capacity utilization service standard (Muni) or the 1 hour-loading factor to be exceeded during the PM peak hour. As described on p. IV.D.24, Muni’s capacity utilization service standard is 85 percent; BART has a 1-hour load factor standard of 135 percent; and the other regional transit agencies have a 1-hour load factor standard of 100 percent.

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7 The criteria for signal warrants is set forth in the Manual on Uniform Traffic Control Devices.
Parking

As a matter of policy, San Francisco does not consider parking supply as part of the permanent physical environment. Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project’s social impacts need not be treated as significant impacts on the environment. However, environmental documents should address the secondary physical impacts that a social impact could trigger (CEQA Guidelines Section 15131(a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles, or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City’s Transit First policy.8

The transportation analysis accounts for potential secondary effects, such as drivers circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle-trips due to others who are aware of constrained parking conditions in a given area and who therefore choose alternative modes of transportation. Hence, any secondary environmental impacts that may result from a shortfall in parking in the vicinity of the proposed project would be minor, and the traffic assignments used in the transportation analysis, as well as in the associated air quality, noise, and pedestrian safety analyses, reasonably address potential secondary effects.

Pedestrians

A proposed project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

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8 These estimates are somewhat conservative since the analysis did not take a credit for the elimination of loading trips associated with the existing uses at the project site.
Bicycles

A proposed project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

Loading

A proposed project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and would create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians.

Emergency Vehicle Access

A proposed project would have a significant effect on the environment if it would result in inadequate emergency access.

Construction

Construction-related impacts, depending on the size of a project, generally would not be considered significant due to their temporary nature and limited duration. However, in circumstances involving large development plans where construction would occur over long periods of time, impacts on transportation and circulation systems due to construction may be considered significant. In any event, construction-related impacts are evaluated with reference to the foregoing significance criteria, bearing in mind the nature and duration of construction as a factor in determining significance.

METHODOLOGY

Project Travel Demand

The travel, parking, and freight/service loading demand estimates for the proposed project were based on the methodology and assumptions developed by the San Francisco Planning Department and published in the Transportation Impact Analysis Guidelines for Environmental Review, October 2002 (SF Guidelines).

Trip Generation

The proposed project would generate approximately 7,221 person-trips per day on weekdays, spread over various modes of transportation. Of these, 898 person-trips would be during the weekday PM peak hour. No trip generation credit has been taken from the existing 6,500-gsf health club facilities currently located across the street from the proposed project (which would
be closed after they relocate to the project site), for the expected reduction in the number of tennis
courts (from nine to four), or for the vehicles entering and exiting the existing parking lot at
Seawall Lot 351; therefore, the estimated trip generation for the proposed project is based on
more conservative assumptions than may actually occur.

Mode Split

The project-generated person trips are assigned to travel modes in order to determine the number
of auto, transit, walk, and “other” trips (“other” trips include bicycle, motorcycle, taxi, and
additional modes). Mode split information for the proposed retail use was taken from the \textit{SF
Guidelines} for retail employee and visitor trips to and from the C-3 (Downtown Commercial)
District. Vehicle occupancy (based on C-3 District data) is then applied to the number of auto
person trips to determine the number of vehicle trips generated for each use. The average mode
splits for trips are approximately 34 percent by auto, 20 percent by transit, and 46 percent by
walk/other modes. The vehicle occupancy rate for work trips is 1.35 persons per vehicle and the
rate is 1.77 persons per vehicle for non-work trips.

Table IV.D-4 presents the net new trip generation by mode for the proposed project for the
weekday PM peak hour. During the weekday PM peak hour, 309 (or 34 percent) of the person-
trips would be by auto, 180 person-trips (20 percent) would be by transit, and 409 person-trips
(46 percent) would be by other modes, such as walking, bicycling, motorcycle, and taxi. The
person-trips by automobile would include single-occupant vehicles and vehicles carrying more
than one person. The project would generate about 173 vehicle trips during the PM peak hour.
Of these vehicle trips, 92 would be inbound and 81 would be outbound.

\textbf{Table IV.D-4: Proposed Project Trip Generation by Mode and Land Use –
Weekday PM Peak Hour}

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Person-Trips</th>
<th>Vehicle-Trips$^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Auto</td>
<td>Transit</td>
</tr>
<tr>
<td>Residential</td>
<td>81</td>
<td>32</td>
</tr>
<tr>
<td>Athletic Club</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Retail</td>
<td>82</td>
<td>39</td>
</tr>
<tr>
<td>Restaurant</td>
<td>118</td>
<td>88</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>309</strong></td>
<td><strong>180</strong></td>
</tr>
</tbody>
</table>

\begin{footnotesize}
\begin{footnote}{Note:}
\footnotetext{1}{“Other” mode includes walking, bicycles, motorcycles, and additional modes such as taxis.}
\footnotetext{2}{In addition, 16 existing vehicles currently using Seawall Lot 351 would enter or exit the public garage during the PM peak hour, for a total of 189 existing plus new vehicle trips.}
\end{footnotesize}
\end{footnotesize}

Trip Distribution/Assignment

The daily and PM peak hour trips generated by a project are distributed to the four quadrants of San Francisco (Superdistricts 1, 2, 3 and 4); the East Bay, North Bay, and South Bay/Peninsula; and outside the region, based on their origin/destination. Most residential trips would originate in Superdistrict 1, where the proposed project is located. Table IV.D-5 shows that the majority of project trips would come from areas within San Francisco and the East Bay, with decreasing percentages from the South Bay and North Bay. The distribution of project-generated trips was obtained from the SF Guidelines. These distribution patterns are used as the basis for assigning project-related vehicle trips to the local and regional roadway network and transit trips to the local and regional transit operators (see Table IV.D-5).

Table IV.D-5: Proposed Project Trip Distribution Patterns by Land Use

<table>
<thead>
<tr>
<th>Place of Trip Origin</th>
<th>Residential Residents</th>
<th>Residential Visitors</th>
<th>Retail Workers</th>
<th>Retail Visitors</th>
<th>Restaurant/Athletic Club Workers</th>
<th>Restaurant/Athletic Club Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Francisco</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superdistrict 1</td>
<td>57.5%</td>
<td>57.5%</td>
<td>12.8%</td>
<td>19.0%</td>
<td>12.8</td>
<td>22.0</td>
</tr>
<tr>
<td>Superdistrict 2</td>
<td>8.3%</td>
<td>8.3%</td>
<td>14.4%</td>
<td>7.0%</td>
<td>14.4</td>
<td>14.0</td>
</tr>
<tr>
<td>Superdistrict 3</td>
<td>8.3%</td>
<td>8.3%</td>
<td>17.0%</td>
<td>8.0%</td>
<td>17.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Superdistrict 4</td>
<td>8.3%</td>
<td>8.3%</td>
<td>11.2%</td>
<td>3.0%</td>
<td>11.2</td>
<td>7.0</td>
</tr>
<tr>
<td>East Bay</td>
<td>9.2%</td>
<td>9.2%</td>
<td>22.4%</td>
<td>11.0%</td>
<td>22.4</td>
<td>11.0</td>
</tr>
<tr>
<td>North Bay</td>
<td>1.1%</td>
<td>1.1%</td>
<td>6.1%</td>
<td>5.0%</td>
<td>6.1</td>
<td>5.0</td>
</tr>
<tr>
<td>South Bay</td>
<td>5.8%</td>
<td>5.8%</td>
<td>14.3%</td>
<td>8.0%</td>
<td>14.3</td>
<td>7.0</td>
</tr>
<tr>
<td>Out of Region</td>
<td>1.5%</td>
<td>1.5%</td>
<td>1.8%</td>
<td>39.0%</td>
<td>1.8</td>
<td>21.0</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>


Parking and Loading Demand

Parking demand for the proposed project was determined based on methodology presented in the SF Guidelines. Parking demand consists of both long-term demand (typically residents and employees) and short-term demand (typically visitors). Long-term parking demand for the residential uses was estimated assuming 1.1 spaces for every studio/one-bedroom residential unit and 1.5 spaces for every residential unit with two or more bedrooms, then applying a midday or evening peak demand percentage. Long-term parking demand for the commercial uses (retail, restaurant, athletic club) was estimated by applying the average mode split and the vehicle occupancy from the trip generation estimation to the number of employees for each of the proposed land uses. Short-term parking for the commercial use was estimated based on the total daily visitor trips and average daily parking turnover rate (5.5 vehicles per space per day).

The residential use of the proposed project would generate a total parking demand for 193 spaces during the midday and 226 spaces in the evening. The commercial uses would generate a total parking demand of 105 spaces (75 short-term and 30 long-term) during the midday and 84 spaces during the evening.
(60 short-term and 24 long-term) in the evening. Overall, the proposed project would generate a new parking demand of 298 spaces during the midday and 310 spaces in the evening. In addition, there are up to 105 spaces currently available at Seawall Lot 351, which would be incorporated into the proposed project public parking garage. The addition of the midday (104 spaces) and evening (68 spaces) utilization of Seawall Lot 351 would increase the weekday parking demand for the proposed project to 402 spaces during the midday, and 378 spaces during the evening.

Loading demand consists of the number of delivery and service vehicle-trips generated by a project, plus the number of loading spaces that would be required to accommodate the demand. The number of daily delivery/service vehicle trips is estimated based on the size of each land use and a truck trip generated rate (specific to each land use). The number of loading spaces necessary to accommodate this demand is based on the anticipated hours of operation, turnover of loading spaces, and an hourly distribution of trips. The information and rates used in the loading demand analysis were obtained from the *SF Guidelines* for the proposed retail use.

The proposed project would generate approximately 59 delivery/service vehicle trips per day, which would result in a demand for 2.7 spaces in the average hour and 3.4 spaces during the peak hour of loading activities. The peak hour for delivery/service vehicles generally occurs between 10 AM and 1 PM and is unrelated to the PM peak commute hour (SF Guidelines).

**IMPACT EVALUATION**

**Existing Plus Project Conditions**

**Impact TR-1: The proposed project would not result in significant transportation impacts in the proposed project vicinity due to vehicle traffic. (Less than Significant)**

The proposed project would generate about 189 vehicle trips (173 vehicles allocated to the proposed new uses plus 16 vehicles allocated to the existing parking lot at SWL 351, see Table IV.D-4) during the weekday PM peak hour, 102 inbound and 87 outbound. The new project weekday PM peak hour vehicle trips were added to existing traffic volumes to obtain Existing plus Project traffic volumes. All vehicles were assigned to the proposed parking garage with access from Washington Street. After the project trips were assigned to the roadway network, the operational performance of each study intersection was then reevaluated to determine if the project would cause any significant traffic-related impacts. The results of this analysis are summarized in Table IV.D-6.

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9 These estimates are somewhat conservative since the analysis did not take a credit for the elimination of loading trips associated with the existing uses at the project site.
### Table IV.D-6: Intersection LOS – Existing plus Project Conditions, Weekday PM Peak Hour

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Existing Conditions</th>
<th>Existing plus Project Conditions</th>
<th>Impact Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Embarcadero/Broadway</td>
<td>D 39.2</td>
<td>D 40.9</td>
<td>N</td>
</tr>
<tr>
<td>2. Embarcadero/Washington</td>
<td>D 39.8</td>
<td>D 41.6</td>
<td>N</td>
</tr>
<tr>
<td>3. Drumm Street/Washington Street</td>
<td>B 10.8</td>
<td>B 11.3</td>
<td>N</td>
</tr>
<tr>
<td>4. Drumm/Main/Market Streets</td>
<td>B 18.2</td>
<td>B 18.3</td>
<td>N</td>
</tr>
<tr>
<td>5. Davis Street/Jackson Street</td>
<td>B(WB) 11.3(WB)</td>
<td>B(WB) 11.4(WB)</td>
<td>N</td>
</tr>
</tbody>
</table>

Notes: Delay in seconds per vehicle.

- Delay in seconds per vehicle.
- Intersection delay presented in seconds per vehicle.
- For unsignalized intersections, delay is presented for the worst stop-controlled approach. Here, that approach is west bound, or “WB.”


Overall, the addition of project-generated vehicle trips would result in minor increases in the average delay per vehicle at all study intersections. All study intersections would continue to operate at the same LOS as under existing conditions (see Table IV.D-6).

Thus, all study intersections would continue to operate at acceptable service levels with project-generated traffic, and the project would not cause significant traffic impacts.

#### Improvement Measure TR-1: Garage Signage

To minimize the possibility of traffic congestion due to vehicles queuing on Washington Street when entering the proposed garage, an electronic sign, to be activated when the garage is full, will be installed by the garage entrance on Washington Street. The sign will also direct motorists towards the Golden Gateway garage (1,350 spaces), located two blocks to the west of the project site, as an alternative parking location.

#### Impact TR-2: The proposed project would not result in significant impacts to transit systems in the proposed project vicinity. (Less than Significant)

**Local Transit**

The proposed project would generate about 179 PM peak hour transit trips (90 inbound and 89 outbound). These transit trips to and from the proposed project would utilize the nearby Muni lines and regional transit lines, and may include transfers to other Muni bus lines and light rail lines, or to other regional transit providers. Based on the trip distribution patterns, it is estimated that of the 89 outbound transit trips, 44 trips would cross the Muni screenlines and 35 trips would cross the regional screenlines, while 10 outbound transit trips would not cross any transit screenline.
The proposed project would increase the ridership at the screenlines in the outbound direction by 44 riders, about 0.2 percent of the total current ridership. The addition of the outbound project-generated riders to the four screenlines would not noticeably increase the overall peak hour capacity utilization.

All the transit screenlines and the eight transit subcorridors that operate below Muni’s level of service threshold (85 percent utilization) under existing conditions would continue to do so under Existing plus Project conditions. The southwest subcorridor that corresponds to the K, L, M, and N Muni Metro lines under Market Street operate at 87 percent utilization under existing conditions and would continue to do so under Existing plus Project conditions.

It is estimated that about 44 trips to/from the proposed project would travel on the F-line, 22 from the north and 22 from the south, as a result, the percent of the capacity utilized by passengers would increase from 103 percent to 104 percent under the Existing plus Project Scenario in the southbound (most congested) direction; a similar increase from 68 percent to 69 percent would take place in the northbound direction. The capacity utilization on the F-line in the southbound direction would continue to be above Muni’s maximum standard of 85 percent. The proposed project contribution to the Existing plus Project ridership would be less than 1.5 percent and about 1.2 percent in the northbound and southbound travel directions, respectively. Therefore, the proposed project would have a less-than-significant impact on Muni service.

Regional Transit Impacts

The 35 PM peak hour outbound transit trips crossing the regional screenlines would be distributed approximately as follows: 27 trips on BART, 2 trips on AC Transit, 1 trip on East Bay ferries, 1 trip on SamTrans, 2 trips on Caltrain, and 2 trips on Golden Gate Transit and ferries.

The addition of project-related passengers would not have a noticeable effect on the regional transit providers during the weekday PM peak hour, as the capacity utilization for all screenlines would remain the same as under existing conditions. The capacity utilization for all regional transit providers would be under their maximum capacity utilization standards. Therefore the proposed project would have a less-than-significant impact on the regional transit lines.

Impact TR-3: The proposed project would not result in significant impacts to pedestrians in the proposed project vicinity. (Less than Significant)

During the PM peak hour, there would be about 272 outbound and 316 inbound pedestrian trips (409 walk/other mode trips plus 179 transit trips) generated by the proposed project. These estimates are based on the mode split information and include trips by walk and other modes, as well as trips by passengers on public transit who would walk from the bus, streetcar, or train stop to the project site. A summary of the proposed-project-generated pedestrian trips for those locations adjacent to the project site is shown in Table IV.D-7.
Table IV.D-7: Pedestrian Trips by Sidewalk Location – Existing and Existing plus Proposed Project Conditions, Weekday PM Peak Hour

<table>
<thead>
<tr>
<th>Location</th>
<th>No. of Pedestrians (both ways)</th>
<th>Existing</th>
<th>Proposed Project</th>
<th>Existing plus Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>West side of The Embarcadero, between Broadway and Washington</td>
<td>194</td>
<td>106</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>North side of Washington Street, between The Embarcadero and Drumm Street</td>
<td>71</td>
<td>294</td>
<td>365</td>
<td></td>
</tr>
<tr>
<td>East side of Drumm, north of Washington Street</td>
<td>222</td>
<td>118</td>
<td>340</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adavant Consulting, April 2010.

As shown in the table, the number of pedestrians on the adjacent sidewalks would increase at all three locations under Existing plus Project conditions. The proposed project would widen the sidewalk on the north side of Washington Street, between The Embarcadero and Drumm Street, from 10 feet to approximately 20 feet, and on the east side of Drumm Street, between Washington and Jackson Streets, from 10 feet to approximately 18 feet, to provide additional landscaping and pedestrian areas (see Figure IV.D-1). The project sponsor would need to seek approval from the Bureau of Street Use and Mapping (Department of Public Works) for the proposed sidewalk widening. With or without the sidewalk widenings proposed as part of the project, the changes in the pedestrian LOS at the three locations would remain acceptable (LOS A or B) under Existing plus Project conditions.

Conflicts between pedestrians and vehicles could occur at the project garage driveway, which could cause the potential for inbound vehicles to queue onto Washington Street. Outbound vehicles would queue inside the garage and would not affect street traffic. Conflicts between outbound vehicles and pedestrians could still occur, but their effect on pedestrians would be reduced because pedestrians on the sidewalk have the right-of-way.

The Transportation Study calculated potential vehicular and pedestrian conflicts for Existing plus Project conditions during the weekday PM peak hour at the project garage driveway.\(^{10}\) The numbers of vehicles and pedestrians per minute are relatively small (about one vehicle and three pedestrians every 30 seconds on average), and it is therefore not anticipated that the proposed project would cause any major conflict or interfere with pedestrian movements in the area. However, in order to improve visibility and awareness of cars/pedestrians at the garage entrance, it is recommended that the proposed project install mirrors and an audible and visual device at the garage entrance to automatically alert pedestrians when a vehicle is exiting the facility.

The two driveways on Drumm Street would service the loading dock area and would have fewer vehicles and pedestrians (about 0.1 commercial vehicles and less than six pedestrians every

\(^{10}\) Transportation Study, p. 54.
minute on average). Therefore, the proposed project would have a less-than-significant pedestrian impact.

**Improvement Measure TR-3: Pedestrian Alert Device**

The project sponsor will install an audible and visual device at the garage entrance to automatically alert pedestrians when a vehicle is exiting the facility.

**Impact TR-4: The proposed project would not result in significant transportation impacts to bicycles in the proposed project vicinity. (Less than Significant)**

There are several bicycle routes in the vicinity of the project site, including major east-west and north-south routes on Market Street and The Embarcadero, respectively. The Embarcadero is part of the City’s designated Bicycle Network (Route #5, Class II, striped bicycle lanes) and 44 bicyclists were counted traveling southbound during the PM peak hour at this location. With the current bicycle and traffic volumes on the adjacent streets, bicycle travel generally occurs without major impedances or safety problems. During the weekday PM peak hour, the project is expected to add vehicle, truck, and bicycle traffic to the roadway network in the vicinity of the project. On the other hand, the proposed project would close the existing driveway for the parking lot at Seawall Lot 351 located on The Embarcadero. Bicycles arriving or leaving the project site would use the Washington Street lobby (using elevators from the garage). Although there are some existing conflicts between bicycles and other modes of travel, including automobiles, transit, and pedestrians, the addition of the project bicycle trips to the roadway network would not substantially affect transportation in the vicinity. Many of the current conflicts result from the existing driveway on The Embarcadero, which would be removed in the proposed project. In addition, the project-related increase in the number of vehicles and trucks on the surrounding streets during the PM peak period would not be large enough to affect bicycles on these corridors. Therefore, the proposed project would result in a less-than-significant impact, and mitigation is not necessary.
The proposed project would provide at least 81 bicycle parking spaces in level B2 of the parking garage, of which 16 would be publicly accessible. The 54 residential bicycle parking spaces would be Class I. The bicycle parking spaces would be located adjacent to the residential or public elevators, respectively, which would be sized appropriately to accommodate bicycles. Additional public bicycle racks would be located at street level near the intersection of The Embarcadero and Washington Street, and on the Jackson Common near Drumm Street.

Automobile-bicycle conflicts already occur in the area, since a driveway entrance/exit already exists on Washington Street to access the Golden Gateway Tennis & Swim Club parking lot to the east of where the proposed project driveway would be located. In addition, a secondary driveway for the parking lot at SWL 351 is also located on Washington Street, near The Embarcadero. These conflicts could become more frequent due to an increase in vehicles entering/exiting the parking garage off of Washington Street; however, the overall traffic volume entering or exiting the garage at Washington Street during the PM peak hour would be relatively small (about three vehicles per minute), which combined with the low bicycle traffic (one every ten minutes) would minimize the potential for automobile-bicycle conflicts. Thus, the increase in the number of conflicts between automobiles and bicycles at this location would be minimal and would not be expected to result in potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining area. Therefore, the proposed project would have less than significant impact on transportation by bicycle as it would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas bicycle transportation.

11 Per the Planning Code (Sections 155.2, 155.4 and 155.5), the proposed project would be required to provide 81 bicycle parking spaces.

- For residential projects over 50 dwelling units, 25 Class I bicycle spaces plus one bicycle space for every four dwelling units over 50 – 165 residential units, 54 Class I bicycle spaces.
- Where the gross square footage of the commercial floor area exceeds 25,000 gsf but is no greater than 50,000 gsf, six Class I or Class II bicycle spaces are required – 41,925 gsf, six Class I or Class II bicycle spaces.
- Garages which offer between 120 and 500 automobile spaces shall provide one Class I or Class II bicycle space for every 20 automobile spaces – 420 spaces, 21 Class I or Class II bicycle spaces.

Per the Planning Code (Section 155.3) the residential component of the proposed project would be exempt from providing shower and clothes locker facilities, while the athletic club, retail and restaurant uses, which exceed 25,000 gsf, would be required to provide at least one shower and two clothes lockers for bicyclists. The proposed project would provide showers and lockers for all athletic club users. The project would also provide at least one additional shower and two clothes lockers for use by retail and restaurant employees on level B2. As currently defined, the proposed project would meet the Planning Code requirements for the provision of bicycle parking, showers and lockers.

Project vehicles accessing the garage driveway could conflict with westbound bicycle traffic at Washington Street, where entering and exiting vehicles would conflict with bicyclists. Although not part of the City’s designated bicycle network, six bicyclists have been counted traveling westbound on Washington Street between The Embarcadero and Drumm Street during the PM peak hour.
Impact TR-5: The proposed project would not result in a significant impact related to an increase in the number of vehicles parking in the project vicinity. (*Less than Significant*)

The proposed project would provide 420 parking spaces (165 spaces allocated for the proposed residential units plus 255 spaces for commercial uses and the general public) in a three-level parking garage below the proposed buildings. The 255 public spaces would include some spaces allocated for the use of athletic club patrons, Golden Gateway Tennis & Swim Club members, and employees, as well as retail and restaurant visitors, and the general public. The proposed project would also include 17 handicap-accessible parking spaces (7 spaces for the residents and 10 spaces for the general public), as well as 6 car-share parking spaces (1 space for the residents and 5 spaces for the general public). The proposed project would eliminate 14 metered on-street spaces.

The proposed project would be required by the Planning Code to provide a total of 216 off-street parking spaces, of which 41 spaces would be for residential uses, 80 for the athletic club use, 34 for retail uses and 61 for restaurant uses. The proposed project would meet and exceed the minimum Planning Code requirements for off-street parking spaces.

Section 204.5(c) of the Planning Code allows a maximum accessory parking for the residential use of 150 percent of the required number of parking spaces, resulting in a total allowance of 62 parking spaces. Since the proposed project would have 165 parking spaces for the residential units, it would exceed the Planning Code allowance for the provision of off-street residential parking and the Project Sponsor would need to seek a Conditional Use authorization (Sections 157 and 204.5 of the Planning Code), or seek adoption of a Special Use District under Section 235 that would allow for the proposed parking ratio.

Section 204.5(c) would also allow a maximum accessory parking for the restaurant, retail, and athletic club uses of 150 percent of the required number of parking spaces, resulting in a total allowance of 263 spaces permitted as accessory parking for the nonresidential uses of the project. The proposed project would allocate 255 parking spaces for the commercial and other public uses, which would be within the Planning Code allowance for the provision of nonresidential off-street parking.

In addition, the Planning Code would require the proposed project to provide 17 handicap-accessible parking spaces (Section 155(i)) and 6 car-share parking spaces (Section 166). The proposed project would meet these Planning Code requirements.

The proposed project would generate a total parking demand for about 298 spaces (75 short-term and 223 long-term) during the midday and 310 spaces (60 short-term and 250 long-term) in the evening. In addition, the existing surface spaces on Seawall Lot 351 (with a demand of 104 spaces during midday and 68 spaces in the evening) would be relocated within the parking garage.
as part of the proposed project, increasing the total parking demand to 402 spaces during the midday and 378 spaces in the evening. Since the proposed project would provide 420 independently accessible parking spaces, there would be a surplus of 18 spaces during the midday and a potential surplus of 42 spaces in the evening. On the other hand, there would be a 28-space and a 61-space deficit in residential parking during the midday and PM peak hours, respectively. There would also be a 46-space and 103-space surplus in public parking during the midday and PM peak hours, respectively.

The project would eliminate 14 metered on-street parking spaces adjacent to the project site. Since on-street parking utilization is below 90 percent, it is expected that existing on-street parking will be able to accommodate the elimination of those spaces.

Since a parking shortfall would not occur, the proposed project would not cause any secondary effects due to cars circling and looking for a parking space, and therefore the proposed project would have a less-than-significant impact. See Improvement Measure TR-1, above.

Impact TR-6: The proposed project would not result in a significant unmet need for loading spaces. (Less than Significant)

The proposed project would provide three off-street freight loading spaces with direct access to Drumm Street. Two of the loading bays would be 35 feet in length and 12 feet in width, with a minimum vertical clearance of 14 feet; a third bay would be 25 feet long by 10 feet wide, with a 12-foot vertical clearance. Trucks would access the loading dock through two rolling gates and driveways directly off of Drumm Street.

Based on the Planning Code (Section 152), two off-street loading spaces would be required for the residential use component of the proposed project (290,500 gsf) and one off-street loading space would be required for the athletic club, retail, and restaurant uses (41,925 gsf). Based on the descriptions of retail uses in Section 218 of the Planning Code, the athletic club is considered a retail use. Thus, the proposed project would meet the Planning Code requirements for off-street freight loading facilities.

The proposed project would generate a loading demand for 2.7 spaces during the average loading hour and 3.4 spaces during the peak loading hour. The average loading hour demand would meet the proposed supply of three off-street loading spaces. The peak loading hour demand would be 0.4 spaces higher than the number of available off-street spaces. However, other spaces are available near the project site. On-street metered spaces designated for commercial loading on Drumm Street are across the street from the proposed loading dock area. Two additional commercial loading spaces are located on the north side of Jackson Street, between Drumm and Davis Streets in the immediate vicinity of the loading dock. Any of these three spaces could be used if the project loading spaces in the dock area are occupied.
Access to the proposed project’s loading docks would be located on Drumm Street, which has relatively low traffic volumes during the weekday PM peak hour. Since delivery trucks would not be large semi tractor-trailers or concentrated during the peak commute hours, delays to existing traffic due to truck operations in and out of the loading dock would be minimal.

The proposed project would provide sidewalk bulb-outs at the northeast corner of the intersection of Washington and Drumm Streets and would widen the sidewalk on the east side of Drumm Street, from Washington Street to the proposed Jackson Common, from 10 feet to approximately 18 feet. These changes would not be expected to negatively affect trucks turning at this location, given the current ample width of Drumm Street, about 57 feet from curb to curb, and assuming that the centerline would be relocated near the center of the resulting street width.

Passenger loading and unloading activities would occur at several locations, mostly at the residential and restaurant drop-off area on Washington Street. In addition, informal passenger loading/unloading could take place at the parking spaces on Drumm Street near the athletic club lobby near Jackson Common, as it currently does.

The proposed project would have a separate, enclosed trash area. As shown in Figure II-8: Proposed Ground Floor Plan, in Chapter II, Project Description, the storage trash area would be immediately adjacent and accessible from the loading dock. Garbage and recycling containers would be brought to the front of the loading dock area for pick-up.

Because there would be sufficient loading space for the proposed project, no significant impact would occur, and no mitigation is necessary.

**Impact TR-7: The proposed project would not impair emergency vehicle access near the project site. (Less than Significant)**

The proposed project would widen the existing sidewalk on the north side of Washington Street and the east side of Drumm Street by approximately 10 feet and 8 feet, respectively, and would construct three sidewalk bulb-outs at the northwest corner of Washington and The Embarcadero, as well as at the northeast and northwest corners of the intersection of Washington and Drumm streets. The analyses of fire truck turning movements presented in the transportation study report show that an articulated SFFD truck would be able to turn unimpeded at the intersections of The Embarcadero/ Washington St., Drumm St./ Washington St., and Drumm St./ Jackson St. Therefore, the Proposed Project would result in a less-than-significant impact to emergency vehicle access.
Impact TR-8: Construction of the proposed project would not cause a significant increase in traffic near the project site. *(Less than Significant)*

The construction of the proposed project would start with the demolition of the existing structures, which would take approximately 2 months. Construction would continue with excavation and shoring for the underground parking garage, for approximately 7 months. The highest demand for construction trucks would occur during this phase, with an average of 20 one-way truck trips (100 one-way truck trips during the peak) that would travel to and from the site on a typical weekday. While the exact routes that construction trucks would use would depend on the location of the available disposal sites, The Embarcadero, Harrison Street, and King Street would likely be the primary haul and access routes to and from I-80, U.S. 101, and I-280. Truck staging and loading activities would occur on site. The impact of construction truck traffic on those streets would be a temporary lessening of their traffic-carrying capacities due to the slower movement and larger turning radii of trucks, which may affect traffic and transit operations.

The next phase of project construction, including site and foundation work, construction of the parking garage, and construction of the buildings, would take an additional 25 months.

Construction-related activities would typically occur Monday through Friday, from 7 AM to 4 PM. It is anticipated that some construction activities may occur later or on Saturdays, on an as-needed basis.

Construction staging would occur primarily within the project site and along the adjacent sidewalks on The Embarcadero, Drumm, and Washington Streets. Pedestrian circulation along those streets would be maintained throughout the construction duration. If it is determined that any temporary traffic lane, parking lane, or sidewalk closures would be needed, the closures would be coordinated with City staff in order to minimize the effects on local traffic. In general, lane and sidewalk closures are subject to review and approval by the Street Construction Coordination Center of the Department of Public Works and the Interdepartmental Staff Committee on Traffic and Transportation of the SFMTA. No Muni bus stops in the vicinity of the project site would be relocated.

An average of 140 workers and a peak of 200 construction workers could be on site during the highest demand phase of construction. The trip distribution and mode split of these workers is not available. However, it is anticipated that the addition of the construction worker vehicle and transit trips would not substantially affect the transportation conditions, as any impacts on the vehicular and transit network would be about ten times less than those associated with the proposed project. In addition, construction workers would cause a temporary parking demand. Since the nearby public off-street and on-street parking facilities in the vicinity of the project site to the north currently have some available spaces during the day, it is anticipated that construction
worker parking demand could be accommodated without substantially affecting areawide parking conditions.

Construction activities related to the upcoming 34th America’s Cup would take place in 2012 and 2013 mostly in the vicinity of Piers 27, 29 and Piers 30, 32, over ½ mile to the north and south of the project site and would not be expected to be substantially affected by the proposed project.

All of the impacts connected with construction of the proposed project would be temporary in duration and would be less than significant.

**Improvement Measure TR-8a: Limitation on Trucking Hours**

During construction, the project sponsor agrees to limit truck movements to the hours between 9 AM and 3:30 PM (or other times, if approved by SFMTA) to minimize construction traffic occurring between 7 and 9 AM or between 3:30 and 6 PM peak traffic hours, when trucks could temporarily impede traffic and transit flow.

**Improvement Measure TR-8b: Agency Consultation**

The project sponsor and construction contractor(s) will meet with the Traffic Engineering Division of SFMTA, the Fire Department, Muni, and the Planning Department to determine the best method to minimize traffic congestion and potential negative effects to pedestrian or bicycle circulation during construction of the proposed project.

**2035 Cumulative Conditions**

Future year 2035 cumulative traffic volumes were developed in order to assess local cumulative developments which result in increases in traffic volumes. For the future year 2035, cumulative intersection traffic volumes were estimated based on growth rates developed for the Northern Waterfront area from the City and County of San Francisco Transportation Authority travel demand model as part of the transportation studies being conducted for the James R. Herman Cruise Terminal at Pier 27. These 2035 cumulative traffic volumes account for growth due to the proposed project as well as cumulative development included in land use forecasts for the Northern Waterfront. In addition to the proposed project, the land use forecast includes, among other developments, the proposed relocation of The Exploratorium to Piers 15/17 (about 300,000 gsf), the proposed cruise terminal at Pier 27 (about 120,000 gsf), a potential mixed-use project at
Piers 30, 32, and Seawall Lot 330 (about 850,000 gsf), and a potential mixed-use project at Seawall Lot 337 and Piers 48, 50 (about 3,000,000 gsf).\textsuperscript{12}

In the spring of 2009, the Planning Department staff conducted the \textit{Northeast Embarcadero Study} at Supervisor Chiu’s request to examine potential development of properties along the west side of The Embarcadero, from Market to North Point Streets to ensure strong connections, both to the neighborhoods to the west and across The Embarcadero to the Bay. The study focused on the Port’s properties between Washington and North Point that are currently being used as parking lots, including Seawall Lot 351 where the proposed project is located. The study resulted in urban design recommendations that can be applied to any new development fronting The Embarcadero. No changes to the existing cumulative development limits were proposed as part of the study. A final report was published in June 2010.\textsuperscript{13}

One of the recommendations presented in the \textit{Northeast Embarcadero Study} calls for the strengthening of the pedestrian character of Washington Street between Columbus Avenue and The Embarcadero through a series of phased improvements. One of the recommended improvements calls for the narrowing of Washington Street between Drumm Street and The Embarcadero by widening the sidewalk on the north side in front of the proposed project from the existing 10 feet to approximately 32 feet, replacing the existing landscaped median with a new 10-foot-wide landscaped median, and providing striped bicycle lanes (Class 2) in both directions between Drumm Street and The Embarcadero. As a result, these recommendations would reduce the existing two travel lanes each way on Washington Street to a single travel lane each way and would eliminate existing metered parking on the north side of the street. The existing double left turn lane from northbound to westbound at the intersection of The Embarcadero and Washington Street would also be reduced to a single lane. An additional recommendation of the \textit{Northeast Embarcadero Study} calls for the strengthening of Broadway as a pedestrian connection between North Beach and the Waterfront. To this end, the study recommends that the existing double left turn lane from northbound to westbound at the intersection of The Embarcadero and Broadway be reduced to a single lane.

\textsuperscript{12} The 2035 land use forecasts and associated traffic volumes do not account for activities related to the 34\textsuperscript{th} America’s Cup race, recently awarded to San Francisco, and which would take place in 2012/13. These sport activities are generally considered temporary and are therefore not included in the development of long-term land use and traffic projections. The potential long-term development plans associated with the America’s Cup are undefined at this time. It has been assumed that those plans would be similar in uses and intensities to those projects previously developed for those sites under consideration (Piers 19/23, Piers 26/28, Piers 30/32, etc.), for inclusion in the 2035 cumulative land use and traffic projections.

\textsuperscript{13} To date, the study has not been adopted by the Planning Commission. The Planning Commission has recognized the completion of the study and urged the Port Commission to consider its recommendations for development proposals on Seawall Lots within the study area. \url{http://www.sf-planning.org/ftp/files/Citywide/NES/Northeast_Embarcadero_Study_Report_June2010.pdf}, accessed January 21, 2011.
While the *Northeast Embarcadero Study* and its recommendations are not part of the proposed project, the recommendations are included in the calculations for transportation impacts in the 2035 cumulative conditions because of the possibility that the City may choose to adopt the recommendations at some future time, including the changes in the street geometry for The Embarcadero, Broadway, and Washington described above.

**Impact TR-9: The proposed project would make a considerable contribution to cumulative traffic impacts at study intersections. (Significant and Unavoidable with Mitigation)**

The 2035 Cumulative intersection operating conditions at the study intersections for the weekday PM peak hour are shown in Table IV.D-8. Under 2035 Cumulative conditions, vehicle delays would increase at the study intersections over existing conditions. Three of the five intersections continue to operate at LOS B or C; however the intersections of The Embarcadero / Broadway and The Embarcadero / Washington Street would degrade to LOS F. The proposed project’s contribution to the critical movements was examined at these two intersections operating at LOS F in 2035 to determine whether the increase due to project trips would contribute considerably to critical movements operating at LOS E or LOS F. For the intersection of The Embarcadero / Broadway, the proposed project’s contribution was not considerable, and therefore, the proposed project would not have a significant impact at the intersection of The Embarcadero and Broadway. At the intersection of The Embarcadero / Washington Street, the contribution of the proposed project to the 2035 cumulative impacts was considerable, and thus would be considered significant. Implementation of Mitigation Measure M-TR-9 would reduce the project’s contribution to cumulative impacts but because it is uncertain how much reduction in project traffic would result from the mitigation measure, the impact would remain significant and unavoidable.

Table IV.D-8: Intersection LOS – 2035 Conditions, Weekday PM Peak Hour$^a$

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Existing Conditions</th>
<th>2035 Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LOS</td>
<td>Delay$^b$</td>
</tr>
<tr>
<td>1. Embarcadero/Broadway$^c$</td>
<td>D</td>
<td>39.2</td>
</tr>
<tr>
<td>2. Embarcadero/Washington$^c$</td>
<td>D</td>
<td>39.8</td>
</tr>
<tr>
<td>3. Drumm Street/Washington Street</td>
<td>B</td>
<td>10.8</td>
</tr>
<tr>
<td>4. Drumm/Main/Market Streets</td>
<td>B</td>
<td>18.2</td>
</tr>
<tr>
<td>5. Davis Street/Jackson Street$^d$</td>
<td>B(WB)</td>
<td>11.3(WB)</td>
</tr>
</tbody>
</table>

*Notes: Delay in seconds per vehicle.

$^a$ There is no intersection where Drumm and Jackson Streets meet.

$^b$ Intersection delay presented in seconds per vehicle.

$^c$ These intersection LOS calculations reflect the intersection modifications proposed in the Northeast Embarcadero Study.

$^d$ For unsignalized intersections, delay is presented for the worst stop-controlled approach. Here, that approach is west bound, or “WB.”

The mitigation measure will be triggered if and at the time changes to The Embarcadero/Washington Street identified in the NES are implemented.

Both intersections would operate at an acceptable level of service in 2035 if the number of lanes were maintained at the status quo, and with minor adjustments to the traffic signal timings.

**Mitigation Measure M-TR-9: Travel Demand Management Plan**

The project sponsor will develop and implement a basic Travel Demand Management (TDM) Plan for the residential and commercial uses at the site. The Plan will build upon those TDM elements already being provided as part of the Proposed Project, such as secured bicycle parking and care share spaces, to which it will add additional components such as facilitating maps of local pedestrian and bicycle routes, transit stops and routes, and providing a taxi call service for the restaurant. The mitigation measure will be triggered if and at the time the changes to The Embarcadero/Washington Street identified in the NES are implemented.

**Impact TR-10: The proposed project would not make a considerable contribution to a significant cumulative impact on transit systems in the proposed project vicinity. (Less than Significant)**

The analysis of cumulative conditions for transit operators considers likely changes to transit service between the existing year and the future year (2035). Included are changes to Muni service following implementation of the TEP recommendations, introduction of new ferry routes as part of the Water Emergency Transportation Authority ferry network, electrification of Caltrain and associated capacity improvements, and other proposed changes identified in the travel demand model developed by the City and County of San Francisco Transportation Authority.

The short-range transit plan documents of the various transit operators and accounted for in the travel demand model developed by the City and County of San Francisco Transportation Authority.

The Muni and regional transit screenline ridership and capacity data for the PM peak hour shown for the year 2035 in Table IV.D-9 and Table IV.D-10, pp. IV.D.36 and IV.D.37, respectively, are based on similar information for the year 2030 recently prepared for the San Francisco Planning Department as part of the proposed Transit Center District Plan environmental review. These tables represent Muni’s and other transit operators’ most current ridership and capacity estimates. Since the cumulative analysis year for the proposed project is 2035 rather than 2030, the transit ridership and capacity values at the screenlines for 2030 were scaled based on the annual average growth rate for the 2008 to 2030 period, in order to represent 2035 conditions.
Table IV.D-9 presents the Muni screenline data for 2035 Cumulative conditions. Between existing and 2035 Cumulative conditions, weekday PM peak hour ridership demand at the four Muni screenlines is projected to increase by about 12,330 passengers (60 percent), while capacity is projected to increase by about 4,510 passengers (15 percent). Capacity utilization of the screenlines under 2035 cumulative conditions is expected to be at or above Muni’s 85 percent capacity standard at all screenlines. Most of the subcorridors are also expected to operate at or above Muni’s capacity standard with the exception of the Fulton/Hayes and Balboa subcorridors in the northwest screenline, the Mission Street subcorridor in the southeast screenline, and the minor Muni lines in the southwest screenline. There would be about 44 outbound transit trips generated by the proposed project during the PM peak hour that would cross the Muni screenlines, of which seven would travel across the northeast screenline, 15 each would travel across the northwest and southeast screenlines and seven would travel across the southwest screenline (Table IV.D-9). The addition of these trips to the Muni screenlines would result in an up to 0.2 percent increase in ridership, which would have a minimal contribution to the cumulative transit ridership and is well within the daily variation of transit demand. Therefore,

<table>
<thead>
<tr>
<th>Screenline</th>
<th>Ridership</th>
<th>Capacity</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kearny/Stockton</td>
<td>1,380</td>
<td>1,630</td>
<td>85%</td>
</tr>
<tr>
<td>Other Lines</td>
<td>1,780</td>
<td>2,070</td>
<td>86%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3,160</td>
<td>3,700</td>
<td>85%</td>
</tr>
<tr>
<td>Northwest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geary</td>
<td>2,710</td>
<td>2,700</td>
<td>100%</td>
</tr>
<tr>
<td>California</td>
<td>2,540</td>
<td>2,050</td>
<td>124%</td>
</tr>
<tr>
<td>Sutter/Clement</td>
<td>930</td>
<td>930</td>
<td>100%</td>
</tr>
<tr>
<td>Fulton/Hayes</td>
<td>1,220</td>
<td>1,640</td>
<td>74%</td>
</tr>
<tr>
<td>Balboa</td>
<td>650</td>
<td>1,330</td>
<td>49%</td>
</tr>
<tr>
<td>Chestnut/Union</td>
<td>1,790</td>
<td>1,950</td>
<td>92%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>9,840</td>
<td>10,600</td>
<td>93%</td>
</tr>
<tr>
<td>Southeast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Street</td>
<td>4,090</td>
<td>2,860</td>
<td>143%</td>
</tr>
<tr>
<td>Mission Street</td>
<td>1,620</td>
<td>2,240</td>
<td>72%</td>
</tr>
<tr>
<td>San Bruno/Bayshore</td>
<td>2,730</td>
<td>3,010</td>
<td>91%</td>
</tr>
<tr>
<td>Other Lines</td>
<td>1,790</td>
<td>1,820</td>
<td>98%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>10,230</td>
<td>9,930</td>
<td>103%</td>
</tr>
<tr>
<td>Southwest</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subway Lines</td>
<td>7,750</td>
<td>7,970</td>
<td>97%</td>
</tr>
<tr>
<td>Haight/Noriega</td>
<td>1,600</td>
<td>1,840</td>
<td>87%</td>
</tr>
<tr>
<td>Other Lines</td>
<td>360</td>
<td>840</td>
<td>43%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>9,710</td>
<td>10,650</td>
<td>91%</td>
</tr>
<tr>
<td>Total All Screenlines</td>
<td>32,940</td>
<td>34,880</td>
<td>94%</td>
</tr>
</tbody>
</table>

Notes: Grey shading indicates utilization that exceeds Muni capacity utilization policy standard. Screenline transit ridership and capacity values for 2035 are estimated based on the annual average growth rate for the 2008 to 2030 period.

Sources: SFMTA; SF Planning Department, 2011; Adavant Consulting, 2011.
the proposed project would have a less-than-significant impact on the Muni lines under cumulative conditions.

Table IV.D-10 presents the regional transit screenline data for 2035 Cumulative conditions. Between existing and 2035 Cumulative conditions, weekday PM peak hour ridership demand at the three regional screenlines is projected to increase by about 31,400 passengers (91 percent), while capacity is projected to increase by about 16,700 passengers (42 percent).

Table IV.D-10: Regional Transit Screenline Analysis, Outbound – 2035 Conditions, Weekday PM Peak Hour

<table>
<thead>
<tr>
<th>Screenline</th>
<th>Hourly Ridership</th>
<th>Hourly Capacity</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART</td>
<td>31,020</td>
<td>19,600</td>
<td>158%</td>
</tr>
<tr>
<td>AC Transit</td>
<td>9,990</td>
<td>6,600</td>
<td>151%</td>
</tr>
<tr>
<td>Ferry</td>
<td>2,840</td>
<td>2,720</td>
<td>104%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>43,850</td>
<td>28,920</td>
<td>152%</td>
</tr>
<tr>
<td>North Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGT Buses</td>
<td>2,980</td>
<td>2,210</td>
<td>135%</td>
</tr>
<tr>
<td>Ferry</td>
<td>1,930</td>
<td>1,700</td>
<td>114%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>4,910</td>
<td>3,910</td>
<td>126%</td>
</tr>
<tr>
<td>South Bay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART</td>
<td>11,770</td>
<td>14,000</td>
<td>84%</td>
</tr>
<tr>
<td>Caltrain</td>
<td>4,820</td>
<td>6,400</td>
<td>75%</td>
</tr>
<tr>
<td>SamTrans</td>
<td>580</td>
<td>940</td>
<td>62%</td>
</tr>
<tr>
<td>Ferries</td>
<td>80</td>
<td>300</td>
<td>27%</td>
</tr>
<tr>
<td>Subtotal</td>
<td>17,250</td>
<td>21,640</td>
<td>80%</td>
</tr>
<tr>
<td><strong>Total All Screenlines</strong></td>
<td><strong>66,010</strong></td>
<td><strong>54,470</strong></td>
<td><strong>121%</strong></td>
</tr>
</tbody>
</table>

Notes: Grey shading indicates utilization that exceeds BART’s capacity utilization policy standard. Screenline transit ridership and capacity values for 2035 are estimated based on the annual average growth rate for the 2008 to 2030 period.

Source: SFMTA; SF Planning Department, 2011; Adavant Consulting, 2011.

Capacity utilization of the screenlines in 2035 is expected to be above each regional transit operator’s load factor standards, except at the South Bay screenline which would operate at 80 percent of capacity. BART’s East Bay, AC Transit, East Bay ferries, and North Bay bus and ferry subcorridors are also expected to operate above each operator’s load factor standards.

There would be about 35 outbound transit trips generated by the proposed project during the PM peak hour that would cross the regional screenlines, of which 19 would travel across the East Bay screenline, two across the North Bay screenline, and 14 across the South Bay screenline. The addition of these trips to the regional screenlines and subcorridors would result in a less than 0.1 percent increase in ridership, which would have a minimal contribution to the cumulative transit ridership and is well within the daily variation of transit demand. Therefore, the proposed project would have a less-than-significant impact on the regional transit lines under cumulative conditions.
E. AIR QUALITY

This section of the EIR evaluates the potential impacts on air quality resulting from implementation of the proposed project. This includes the potential for the proposed project to conflict with or obstruct implementation of the applicable air quality plan; to violate an air quality standard or contribute substantially to an existing or projected air quality violation; to result in a cumulatively considerable net increase of any criteria air pollutant for which the project region is in nonattainment; to expose sensitive receptors to substantial pollutant concentrations; or to create objectionable odors that would affect a substantial number of people. This section identifies both project impacts and cumulative environmental impacts, as well as feasible mitigation measures that could reduce or avoid the identified impacts.

Section IV.F, Greenhouse Gases, evaluates project greenhouse gas (GHG) emissions and their potential contribution to climate change.

SETTING

The project site is located in the City and County of San Francisco, which is within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB also comprises all of Alameda, Contra Costa, Marin, Napa, San Mateo, and Santa Clara Counties, the southern half of Sonoma County, and the southwestern portion of Solano County.

Ambient air quality is influenced by climatological conditions, topography, and the quantity and type of pollutants released in an area. The major determinants of transport and dilution of a given pollutant are wind, atmospheric stability, and terrain; sunshine can impact the concentrations of photochemical pollutants.

CLIMATE, TOPOLOGY, AND METEOROLOGY

The regional climate in the SFBAAB is considered semi-arid and is characterized by mild, dry summers and mild, moderately wet winters (about 90 percent of the annual total rainfall is received in the November-April period), moderate daytime onshore breezes, and moderate humidity. The climate is dominated by a strong, semi-permanent, subtropical high-pressure cell over the northeastern Pacific Ocean. Climate is also affected by the moderating effects of the adjacent oceanic heat reservoir. In summer, when the high-pressure cell is strongest and farthest north, fog forms in the morning, and temperatures are mild. In winter, when the high-pressure cell is weakest and farthest south, occasional rainstorms occur.
The project site is located in the San Francisco Peninsula (Peninsula) climatological subregion that extends northwest from San Jose to the Golden Gate. The Santa Cruz Mountains run up the center of the Peninsula, creating an area of warmer temperatures and fewer foggy days to the east where the ridgeline blocks the marine layer. In San Francisco, the mean maximum summer temperatures are in the mid-60s degrees Fahrenheit, while mean minimum temperatures during the winter months are in the high-30s to low-40s degrees Fahrenheit. Annual average wind speeds range from 4 to 9 knots throughout the Peninsula with prevailing winds from the west, although local wind patterns are often influenced greatly by local topographic features.

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate and over the lower portions of the San Francisco Peninsula. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream, producing southwest winds at Berkeley and northwest winds at San Jose. Wind speeds may be locally strong in regions where air is channeled through a narrow opening such as the Golden Gate or San Bruno Gap. For example, the average wind speed at San Francisco International Airport from 3:00 PM to 4:00 PM in July is about 17 knots, compared with only about 9 knots at San Jose and less than 6 knots at the Farallon Islands.

The sea breeze between the coast and the Central Valley commences near the surface along the coast in late morning or early afternoon; it may be first observed only through the Golden Gate. Later in the day the layer deepens and intensifies while spreading inland. As the breeze intensifies and deepens it flows over the lower hills farther south along the Peninsula. This process frequently can be observed as a bank of stratus “rolling over” the coastal hills on the west side of the Bay. The depth of the sea breeze depends in large part upon the height and strength of the inversion. The generally low elevation of this stable layer of air prevents marine air from flowing over the coastal hills. It is unusual for the summer sea breeze to flow over terrain exceeding 2,000 feet in elevation.

In winter, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon, and otherwise light and variable winds.

Onshore winds from the west dominate at the project site such that emissions from the project would be blown eastward over the San Francisco Bay.

EXISTING AIR QUALITY CONDITIONS

In addition to climate, topology, and meteorology, a wide range of emissions sources — such as dense population centers, heavy vehicular traffic, and industry — influences the air quality within the SFBAAB. Air pollutant emissions within the Bay Area are generated by stationary (or point),
areawide, and mobile sources. Stationary sources exist at identified locations and are usually associated with specific large manufacturing and industrial facilities; examples include fossil-fueled power plants, large boilers that provide industrial process heat, and backup diesel generators. Areawide sources consist of many smaller point sources that are widely distributed spatially; examples include residential and commercial water heaters, painting/coating operations, power lawn mower use, agricultural operations, landfills, and the use of consumer products such as barbeque lighter fluid, hair spray, etc. Mobile sources include on-road motor vehicles and other transportation sources like aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by natural sources such as fine dust particles suspended in the air by high winds.

Criteria Pollutants

The Federal and State governments have established ambient air quality standards — National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively — for outdoor concentrations of a number of pollutants to protect the health and welfare of the people most sensitive to their effects. Such pollutants are called “criteria” pollutants, the most common of which are listed below in Table IV.E-1.

Ozone (O₃)

Ozone is a gas that is not directly emitted into the air but formed when reactive organic gases (ROG) and nitrogen oxides (NOx) — both byproducts of internal combustion engine exhaust (ROG can also originate from the evaporation of chemical solvents or fuels) — undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are conducive to its formation. Because of the reaction time involved in forming ozone, peak ozone concentrations are often found far downwind of precursor emissions. Therefore, ozone is seen as a regional pollutant where emissions and generation occur over large areas.

Emissions of the ozone precursors ROG and NOx from both mobile (vehicle) and stationary sources have decreased in the SFBAAB since 1975 and are projected to continue declining through 2020. Reasons for the decrease include the implementation of strict motor vehicle emissions controls, new controls on oil refinery fugitive emissions, and new rules for control of ROG from industrial coatings and solvent operations. Concomitantly, the peak 1-hour and 8-hour concentrations have declined by nearly 18 percent during the last 20 years.
### Table IV.E-1: State and Federal Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>(State) SAAQS(^a)</th>
<th>Attainment Status</th>
<th>(Federal) NAAQS(^b)</th>
<th>Attainment Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1 hour</td>
<td>0.09 ppm</td>
<td>N</td>
<td>NA</td>
<td>See Note c</td>
</tr>
<tr>
<td></td>
<td>8 hour</td>
<td>0.07 ppm</td>
<td>U(^d)</td>
<td>0.075 ppm</td>
<td>N/Marginal</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>1 hour</td>
<td>20 ppm</td>
<td>A</td>
<td>35 ppm</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>8 hour</td>
<td>9 ppm</td>
<td>A</td>
<td>9 ppm</td>
<td>A</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO(_2))</td>
<td>1 hour</td>
<td>0.18 ppm</td>
<td>A</td>
<td>0.1 ppm</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>NA</td>
<td>NA</td>
<td>0.053 ppm</td>
<td>A</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO(_2))</td>
<td>1 hour</td>
<td>0.25 ppm</td>
<td>A</td>
<td>0.075 ppm(^f)</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>24 hour</td>
<td>0.04 ppm</td>
<td>A</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Particulate Matter (PM(_{10}))</td>
<td>24 hour</td>
<td>50 (\mu)g/m(^3)</td>
<td>N</td>
<td>150 (\mu)g/m(^3)</td>
<td>U</td>
</tr>
<tr>
<td></td>
<td>Annual(^f)</td>
<td>20 (\mu)g/m(^3)</td>
<td>N</td>
<td>50 (\mu)g/m(^3)</td>
<td>A</td>
</tr>
<tr>
<td>Fine Particulate Matter (PM(_{2.5}))</td>
<td>24 hour</td>
<td>NA</td>
<td>NA</td>
<td>35 (\mu)g/m(^3)</td>
<td>N (^g)</td>
</tr>
<tr>
<td></td>
<td>Annual(^f)</td>
<td>12 (\mu)g/m(^3)</td>
<td>N</td>
<td>15 (\mu)g/m(^3)</td>
<td>A</td>
</tr>
<tr>
<td>Sulfates</td>
<td>24 hour</td>
<td>25 (\mu)g/m(^3)</td>
<td>A</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Lead</td>
<td>30 day</td>
<td>1.5 (\mu)g/m(^3)</td>
<td>A</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td>Cal. Quarter</td>
<td>NA</td>
<td>NA</td>
<td>1.5 (\mu)g/m(^3)</td>
<td>A</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>1 hour</td>
<td>0.03 ppm</td>
<td>U</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Visibility-Reducing Particles</td>
<td>8 hour</td>
<td>See Note h</td>
<td>A</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes:
- A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; \(\mu\)g/m\(^3\) =micrograms per cubic meter.
- \(^a\) SAAQS = State ambient air quality standards (California). SAAQS for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, 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 8-hour ozone standard is attained when the three-year average of the fourth highest daily concentration is 0.075 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 PM10 standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 \(\mu\)g/m\(^3\). The 24-hour PM2.5 standard is attained when the three-year average of the 98th percentile is less than the standard. The 24-hour PM2.5 standard is attained when the 3-year average of 98th percentiles is less than 35 \(\mu\)g/m\(^3\).
- \(^c\) The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005.
- \(^d\) This State 8-hour ozone standard was approved in April 2005 and became effective in May 2006.
- \(^e\) On June 2, 2010, the U.S. EPA established a new 1-hour SO\(_2\) standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The EPA also revoked both the existing 24-hour SO\(_2\) standard of 0.14 ppm and the annual primary SO\(_2\) standard of 0.030 ppm, effective August 23, 2010.
- \(^f\) State standard = annual geometric mean; national standard = annual arithmetic mean.
- \(^g\) In June 2002, the California Air Resources Board (CARB) established new annual standards for PM2.5 and PM10.
- \(^h\) 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.

Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless gas produced by the incomplete combustion of fuels, primarily from transportation sources but also from wood-burning stoves, incinerators, and other industrial sources. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines — unlike ozone — and motor vehicles operating at slow speeds are the primary source of CO in the Bay Area, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections. In contrast to ozone, which tend to be regional in nature, CO impacts tend to be localized.

When CO enters the bloodstream, it reduces the delivery of oxygen to the body's organs and tissues. Health threats are most serious for those who suffer from cardiovascular disease. Exposure to elevated CO levels can cause impairment of visual perception, manual dexterity, learning ability and performance of complex tasks.

Nitrogen Dioxide (NO₂)

Nitrogen dioxide is a brownish, highly reactive gas that is present in all urban environments. The major human-made NO₂ sources are combustion devices, such as boilers or turbines, and internal combustion engines, such as automobile or generator engines. Combustion devices emit primarily nitrogen oxide (NO), which reacts through oxidation in the atmosphere to form NO₂. NO and NO₂ are collectively referred to as NOx. As NO₂ is formed and depleted by reactions associated with photochemical smog, the NO₂ concentrations in a particular geographical area may not be representative of the local NOx emissions sources.

On January 22, 2010, EPA adopted a new 1-hour NO₂ standard at the level of 100 parts per billion (ppb). It is intended to protect against adverse health effects associated with short-term exposure to NO₂, including respiratory effects that can result in admission to a hospital. In addition to establishing an averaging time and level, EPA also is setting a new “form” for the standard. The form is the air quality statistic used to determine if an area meets the standard. The form for the 1-hour NO₂ standard, is the 3-year average of the 98th percentile of the annual distribution of daily maximum 1-hour average concentrations.

NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. NO₂ increases hyperresponsiveness of asthmatic individuals after short-term exposures and longer-term exposure to NO₂ increases respiratory illness among children. Recent studies have found that exposure increases airway inflammation, and results in increased hospital or emergency room visits for asthma and cardiovascular disease, and possibly increases the risk of cardiopulmonary mortality. Children exposed to NO₂ may experience reduced maximum lung
Sulfur Dioxide (SO$_2$)

Sulfur dioxide is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.

High concentrations of sulfur dioxide (SO$_2$) affect breathing and may aggravate existing respiratory and cardiovascular disease. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly.

Respirable Particulate Matter (PM$_{10}$) and Fine Particulate Matter (PM$_{2.5}$)

Respirable particulate matter and fine particulate matter consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen, forest fires, and windblown dust, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, combustion products, abrasion of tires and brakes, and construction activities. Particulate matter can also be formed in the atmosphere by condensation of SO$_2$ and ROG.

In general, the smallest particles pose the highest human health risks. PM exposure can affect breathing, aggravate existing respiratory and cardiovascular disease, alter the body's defense systems against foreign materials, and damage lung tissue, contributing to cancer and premature death. Individuals with chronic obstructive pulmonary or cardiovascular disease, asthmatics, the elderly and children are most sensitive to the effects of PM.

Lead (Pb)

Lead occurs in the atmosphere as particulate matter. Historically, the combustion of leaded gasoline was the primary source of airborne lead in the Bay Area, though the use of leaded gasoline is no longer permitted for on-road motor vehicle. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.

Exposures to even small amounts of lead over a long time can accumulate to reach harmful levels. Harmful effects may therefore develop gradually without warning. Short-term exposure to high levels of lead may also cause harm. Lead can adversely affect the nervous, reproductive, digestive, cardiovascular blood-forming systems, and the kidney. In men, adverse reproductive effects include reduced sperm count and abnormal sperm. In women, adverse reproductive effects include reduced fertility, still-birth, or miscarriage. Children are a sensitive population as they...
absorb lead more readily and their developing nervous system puts them at increased risk for lead-related harm, including learning disabilities.

**Sulfates (SO₄)**

Sulfates are the fully oxidized ionic form of sulfur. Emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO₂) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

**Hydrogen Sulfide (H₂S)**

Hydrogen sulfide is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas, and natural gas, and can be emitted as the result of geothermal energy exploitation.

Breathing H₂S at levels above the standard will result in exposure to a very disagreeable odor. Higher concentrations result in irritation of the eyes, nose and throat, headache, dizziness, nausea, vomiting, coughing and breathing difficulty.

**Vinyl Chloride (chloroethene)**

Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. While the California ambient air quality standard for vinyl chloride is still in existence, the compound has been typically evaluated using risk assessment methods since 1990, when the California Air Resources Board (CARB) identified it as a Toxic Air Contaminant (TAC).

Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.
Visibility-Reducing Particles

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

There are no health effects associated with visibility-reducing particles beyond those identified for Particulate Matter, so the statewide standard is intended to protect the "welfare" of Californians. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

Monitoring Station Data and Attainment Area Designations

The SFBAAB has instances of recorded violations of NAAQS and CAAQS for ozone, CO, and PM_{10} over the last 30 years. Since the early 1970s, substantial progress has been made toward controlling these pollutants. Emissions and ambient concentrations of CO decreased in the SFBAAB with the introduction of the catalytic converter in 1975, and with subsequent improvements in motor vehicle engine technology and the introduction of oxygenated fuel. No violations of the CAAQS or NAAQS for CO have been recorded in the Bay Area since 1991. The Bay Area is in attainment for all State and Federal standards except those for ozone, PM_{10}, and PM_{2.5}. For ozone, the SFBAAB does not meet either the State or Federal standards. For PM_{10} and PM_{2.5}, the SFBAAB does not meet the State standards but does meet the current Federal standards.

The Bay Area Air Quality Management District’s (BAAQMD) air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the San Francisco Bay Area. Table IV.E-2 presents a five-year summary of highest annual criteria air pollutant concentrations (2005 to 2009), collected at the BAAQMD’s air quality monitoring station at 16th and Arkansas Streets, in San Francisco’s lower Potrero Hill area.
Table IV.E-2: Summary of San Francisco Air Quality Monitoring Data (2005–2009)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Most Stringent Applicable Standard</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>&gt;9 pphm(^a)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Max. 1-hour Conc. (pphm)(^b)</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>&gt;8 pphm(^b)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Max. 8-hour Conc. (pphm)(^b)</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>&gt;9 ppm(^a)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Max. 8-hour Conc. (ppm)</td>
<td>2.1</td>
<td>2.1</td>
<td>1.6</td>
<td>2.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Suspended Particulates (PM(_{10}))</td>
<td>&gt;50 μg/m(^3)(^b)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Max. 24-hour Conc. (μg/m(^3))</td>
<td>46</td>
<td>61</td>
<td>70</td>
<td>41</td>
<td>36</td>
</tr>
<tr>
<td>Suspended Particulates (PM(_{2.5}))</td>
<td>&gt;35 μg/m(^3)(^b)</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Max. 24-hour Conc. (μg/m(^3))</td>
<td>44</td>
<td>54</td>
<td>45</td>
<td>39</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Annual Average (μg/m(^3))</td>
<td>9.5</td>
<td>9.7</td>
<td>8.9</td>
<td>11.4</td>
<td>9.7</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO(_2))</td>
<td>&gt;25 pphm(^a)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Max. 1-hour Conc. (pphm)(^b)</td>
<td>7</td>
<td>11</td>
<td>7</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO(_2))</td>
<td>&gt;40 ppb(^a)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>ND</td>
</tr>
<tr>
<td></td>
<td>Max. 1-hour Conc. (ppb)(^b)</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>4</td>
<td>ND</td>
</tr>
</tbody>
</table>

Notes: **Bold** values are in excess of applicable standard.

- conc. = concentration; ppm = parts per million; pphm = parts per hundred million; ppb=parts per billion; μg/m\(^3\) = micrograms per cubic meter
- ND = No data or insufficient data.
- State standard, not to be exceeded.
- Federal standard, not to be exceeded.
- Based on a sampling schedule of one out of every six days, for a total of approximately 60 samples per year.
- Federal standard was reduced from 65 μg/m\(^3\) to 35 μg/m\(^3\) in 2006.


Toxic Air Contaminants (TACs)

TACs include a diverse group of air pollutants that can adversely affect human health. They are not fundamentally different from the criteria pollutants, but they have not had ambient air quality standards established for them for a variety of reasons (e.g., insufficient dose-response data, association with particular workplace exposures rather than general environmental exposure, etc.). The health effects of TACs can result from either acute or chronic exposure; many types of
cancer are associated with chronic TAC exposures, but TAC exposures can also cause other adverse health effects. Consequently, the BAAQMD has established a cancer risk threshold and acute and chronic non-cancer health index thresholds for TAC emissions.

Significant sources of TACs in the environment include industrial processes, such as petroleum refining, chemical manufacturing, electric utilities, metal mining/refining, and chrome plating; commercial operations, such as gasoline stations, dry cleaners, and buildings with boilers and/or emergency generators; and transportation activities, particularly diesel-powered vehicles, including trains, buses, and trucks. The CARB has determined that the 10 compounds which pose the greatest known health risk in California, based primarily on ambient air quality data, are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

**Diesel Particulate Matter**

DPM is generated when an engine burns diesel fuel and consists of a mixture of gases and fine particles (also known as soot) that can penetrate deeply into the lungs, where they can contribute to a range of health problems. In 1998, the CARB identified particulate matter from diesel-powered engines as a TAC based on its potential to cause cancer and other adverse health effects. Diesel exhaust is a complex mixture that includes hundreds of individual constituents; it is identified by the State of California as a known carcinogen. However, under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole.

Based on receptor modeling techniques, the CARB estimated the background DPM health risk in the SFBAAB in 2000 to be approximately 500 cancer cases per million people, which reflects a drop of approximately 36 percent from estimates for 1990.

**Traffic-Related Air 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 also contribute to particulates by generating road dust and through tire wear. Epidemiologic studies have demonstrated that people living in proximity to freeways or busy roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. Air pollution monitoring done in conjunction with epidemiological studies has confirmed that roadway-related health effects vary with exposure to particulate matter and nitrogen dioxide. 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.¹ As a result, the California Air Resources Board (CARB) recommends that new sensitive land uses not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day.

**REGULATORY FRAMEWORK**

Air quality within the Bay Area is maintained and improved through the efforts of various Federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of other programs.

**Federal**

At the Federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementing national air quality programs. The USEPA enforces the Federal Clean Air Act (CAA) and associated NAAQS. As shown in Table IV.E-1, the USEPA has established NAAQS for the following criteria air pollutants: ozone, CO, NO₂, SO₂, PM₁₀, PM₂.₅, and lead. The standards are established to protect the public health and welfare. The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal CAA Amendments of 1990 (CAAA) added requirements for states with non-attainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The USEPA must review all SIPs to determine whether they conform to the mandates of the Federal CAA and its amendments and to determine whether implementing the SIPs will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan that imposes additional control measures may be prepared for the non-attainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

**State**

The CARB, a part of the State Environmental Protection Agency (Cal/EPA), is responsible for the coordination and administration of both Federal and State air pollution control programs within California and for implementing the California Clean Air Act (CCAA). The CCAA, which was adopted in 1988, required the CARB to establish CAAQS (Table IV.E-1). The CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate

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matter, and the previously mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of those studies.

The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The act specifies that local air districts should focus particular attention on reducing emissions from transportation and area-wide emission sources and gives districts the authority to regulate indirect sources of emissions.

Among the CARB’s other responsibilities are overseeing local air district compliance with California and Federal laws, approving local air quality plans, submitting SIPs to the USEPA, monitoring air quality, determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

In 2000, the CARB began a program of identifying and reducing risks associated with the particulate matter emissions from diesel-fueled vehicles in order to reduce diesel-related health risks. The CARB plan consists of promulgating new regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles, new retrofit requirements for existing on-road, off-road and stationary diesel-fueled engines and vehicles and new diesel fuel regulations to reduce the sulfur content of diesel fuel as required by advanced diesel emissions control systems. Under the plan, the overall risk reduction program is expected to result in a 75 percent reduction in diesel particulate emissions by 2010 (compared to 2000 levels) and an 85 percent reduction by 2020.

The Air Quality and Land Use Handbook: A Community Health Perspective (2005) provides CARB recommendations for the siting of new sensitive land uses (i.e., residences, schools, daycare centers, playgrounds, and medical facilities) near recognized major sources of TACs (e.g., freeways, large warehouses/ distribution centers, rail yards, etc.).

Regional

The BAAQMD is the primary agency responsible for comprehensive air pollution control in the SFBAAB. To that end, the BAAQMD works directly with the Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), and local governments and cooperates actively with all Federal and State government agencies. The BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.
The BAAQMD is directly responsible for reducing emissions from stationary (area and point) sources and for assuring that State controls on mobile sources are effectively implemented. It has responded to these requirements by preparing a series of Ozone Attainment Plans and Clean Air Plans that comply with the Federal CAA and the CCAA to accommodate growth, reduce the pollutant levels in the SFBAAB, meet NAAQS and CAAQS, and minimize the fiscal impact that pollution control measures have on the local economy. The Ozone Attainment Plans are prepared for the Federal ozone standard, and the Clean Air Plans are prepared for the State ozone standards.

The Bay Area 2010 Clean Air Plan\(^2\) is the current ozone air quality plan. The Plan serves to:

- Update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement “all feasible measures” to reduce ozone;
- Consider the impacts of ozone control measures on particulate matter (PM), air toxics, and greenhouse gases in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2009-2012 timeframe.

In 2003, the Legislature enacted Senate Bill 656 (SB 656) to reduce public exposure to PM\(_{10}\) and PM\(_{2.5}\). SB 656 required the CARB, in consultation with local air districts, to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures that could be used by the CARB and the air districts to reduce PM\(_{10}\) and PM\(_{2.5}\).

Although the BAAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within the SFBAAB. However, the BAAQMD has prepared CEQA Air Quality Guidelines to indirectly address these issues in accordance with the projections and programs of the Clean Air Plan. The BAAQMD CEQA Air Quality Guidelines assists Lead Agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the SFBAAB. Specifically, the CEQA Air Quality Guidelines explain the procedures that the BAAQMD recommends be followed during environmental review processes required by CEQA. The CEQA Air Quality Guidelines provide direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The BAAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the SFBAAB, and adverse impacts will be minimized. The BAAQMD revised their CEQA guidelines in June 2010.

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Local

San Francisco General Plan

The goal of the Air Quality Element of the San Francisco General Plan is to reduce the level of air pollutants and to protect and improve public health, welfare, and quality of life of the citizens of San Francisco and the residents of the metropolitan region. To do so, the General Plan designates policies designed to:

- Adhere to State and Federal AAQS and programs, and reduce mobile sources of air pollution through implementation of the Transportation Element of the General Plan;
- Decrease the air quality impacts of development by coordination of land use and transportation decisions;
- Improve air quality by increasing public awareness regarding the negative health effects of pollutants generated by stationary and mobile sources;
- Minimize particulate matter emissions from road and construction sites; and
- Link the positive effects of energy conservation and waste management to emission reductions.

City of San Francisco Health Code

Construction Dust Control

San Francisco Health Code Article 2213, Construction Dust Control, requires preparation of a site-specific dust control plan for construction projects within 1,000 feet of sensitive receptors (residence, school, childcare center, hospital or other health-care facility or group-living quarters). That plan must include a number of equivalent measures to minimize visible dust. These measures contain the dust control measures presented in the BAAQMD CEQA Air Quality Guidelines; however, the San Francisco Health Code requirements increase the watering frequency as well as adds monitoring, recordkeeping, third-party verification, and community outreach requirements not found in the BAAQMD CEQA Air Quality Guidelines.

Air Quality Assessment and Ventilation Requirement for Urban Infill Residential Developments

Epidemiologic studies have demonstrated that people who live near freeways and high-traffic roadways have poorer health outcomes, including increased asthma symptoms and respiratory infections and decreased pulmonary function and lung development in children. As a result, the San Francisco Department of Public Health (DPH) sponsored local legislation to require air quality modeling and installation of air filtration systems under specified circumstances, now codified as Article 38 of the Health Code (Article 38). Article 38 requires that proposed residential projects located near high-volume roadways (mapped as the Potential Roadway Exposure Zone) be subject to air quality modeling conducted to determine if annual average...
IV. Environmental Setting and Impacts
   E. Air Quality

Concentrations of PM$_{2.5}$ from roadway sources within 500 feet of a project site would exceed a concentration of 0.2 micrograms per cubic meter ($\mu g/m^3$) (annual average).\(^3\) This action level (of 0.2 $\mu g/m^3$) represents about 8 percent to 10 percent of the range of ambient PM$_{2.5}$ concentrations in San Francisco based on monitoring data, and is based on epidemiological research that indicates that such a increase in concentration can result in an approximately 0.28 percent increase in non-injury mortality, or an increased mortality rate of approximately 20 “excess deaths” per year per one million population in San Francisco.\(^4,5\) If this standard is exceeded, Article 38 requires that the project applicant design the project to minimize air pollutants indoors or install a filtered air supply system, with high-efficiency filters.

The project site, at 8 Washington Street, is located within the Potential Roadway Exposure Zone, as mapped by DPH. In consultation with DPH, an Air Quality Assessment was prepared for the proposed project. Results of the assessment indicate that the project site does not exceed a PM$_{2.5}$ concentration greater than 0.2 micrograms per cubic meter.\(^6\) Thus, the proposed project is not required to install a filtered air supply system as per the Health Code.

IMPACTS

SIGNIFICANCE THRESHOLDS

The Planning Department Initial Study Checklist, which incorporates Appendix G of the state CEQA Guidelines, provides a framework of topics to be considered in evaluating potential impacts under CEQA.

Implementation of a project could have a potentially significant impact related to air quality if the project were to:

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\(^3\) For purposes of evaluation of potential effects of PM$_{2.5}$ exposure, DPH also recommends analysis where there are more than 50,000 daily vehicles within 330 feet (100 meters) of the site, or more than 10,000 daily vehicles within 165 feet (50 meters). These latter two conditions are included to capture equivalent impacts from lesser concentrations of traffic in smaller areas than the ARB-recommended standard of 100,000 daily vehicles within 500 feet (150 meters) (CARB, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005).

\(^4\) “Excess deaths” (also referred to as premature mortality) refer to deaths that occur sooner than otherwise expected, absent the specific condition under evaluation; in this case, exposure to PM$_{2.5}$.

\(^5\) San Francisco Department of Public Health, Occupational and Environmental Health Section, Program on Health, Equity, and Sustainability, “Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review,” May 6, 2008. Twenty excess deaths per million based on non-injury, non-homicide, non-suicide mortality rate of approximately 714 per 100,000. Although San Francisco’s population is less than one million, the presentation of excess deaths is commonly given as a rate per million population.

\(^6\) Patrick Fosdahl, MS, REHS, San Francisco Department of Public Health, Letter to Paul Osmundson re: 8 Washington Street Air Quality Assessment, April 28, 2009. A copy of this letter is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.
• Conflict with or obstruct implementation of the applicable air quality plan;
• Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
• Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
• Expose sensitive receptors to substantial pollutant concentrations; or
• Create objectionable odors affecting a substantial number of people.

For project-level impact analysis, the BAAQMD recommends various thresholds and tests of significance. BAAQMD significance thresholds are summarized in Table IV.E-3. However, on December 15, 2010, the District’s Board of Directors revised the effective date for the risk thresholds for new receptors from January 1, 2011 to May 1, 2011. All other CEQA thresholds of significance adopted by the Board of Directors on June 2, 2010 remain effective as of June 2, 2010. In addition, BAAQMD Resolution No. 2010-06, which was approved by the BAAQMD Board of Directors on June 2, 2010, clarifies that it is BAAQMD’s policy that the revised significance thresholds be applied to those of projects whose notices of preparation are issued (and environmental analyses begun) after June 2, 2010.7 The following analysis of air quality impacts from the 8 Washington Street project is based on BAAQMD’s most recent thresholds of significance and the BAAQMD CEQA Air Quality Guidelines, May 2011.

**IMPACT EVALUATION**

Project-related air quality impacts fall into two categories: short-term impacts due to construction, and long-term impacts due to project operation. First, during project construction, the project would affect local particulate concentrations primarily due to fugitive dust sources, as well as construction equipment exhaust. Over the long term, the project would result in an increase in emissions primarily due to increased motor vehicle trips and an emergency back up generator as required per the fire code. On-site stationary sources (such as natural gas boilers for water and space heating) and area sources (such as landscaping and use of consumer products) would result

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7 It is BAAQMD’s policy that the risk and hazards thresholds for siting new receptors be applied to projects whose NOP was prepared after May 1, 2011.
### Table IV.E-3: BAAQMD Air Quality Project-Level Thresholds of Significance

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Construction-Related</th>
<th>Operational-Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria Air Pollutants</td>
<td>Average Daily</td>
<td>Average Daily</td>
</tr>
<tr>
<td>and Precursors (Regional)</td>
<td>Emissions (lbs/day)</td>
<td>Emissions (lbs/day)</td>
</tr>
<tr>
<td>ROG</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>NOx</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>PM$_{10}$ (Exhaust)</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>PM$_{2.5}$ (Exhaust)</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>PM$<em>{10}$/PM$</em>{2.5}$ (Fugitive Dust)</td>
<td>Best Management Practices</td>
<td>None</td>
</tr>
<tr>
<td>Local CO</td>
<td>None</td>
<td>9.0 ppm (8-hour average), 20.0 ppm (1-hour average)</td>
</tr>
<tr>
<td>Risks and Hazards</td>
<td>Same as Operational</td>
<td>Compliance with a Qualified Community Risk Reduction Plan</td>
</tr>
<tr>
<td>(Individual Projects)</td>
<td>Thresholds</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased cancer risk of &gt;10.0 in a million OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased non-cancer risk of &gt;1.0 Hazard Index (Chronic or Acute)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM$_{2.5}$ increase &gt; 0.3 µg/m$^3$ annual average</td>
</tr>
<tr>
<td>Risks and Hazards</td>
<td>Same as Operational</td>
<td>Compliance with a Qualified Community Risk Reduction Plan</td>
</tr>
<tr>
<td>(Cumulative Threshold)</td>
<td>Thresholds</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cancer: &gt; 100 in a million (from all local sources)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-cancer: &gt;10.0 Hazard Index (from all local sources)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM$_{2.5}$ &gt; 0.8 µg/m$^3$ annual average (from all local sources)</td>
</tr>
<tr>
<td>Odors</td>
<td>None</td>
<td>5 confirmed complaints per year averaged over 3 years</td>
</tr>
</tbody>
</table>

**Notes:**
- CO = carbon monoxide; lb/day = pounds per day; NOx = oxides of nitrogen; PM$_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM$_{10}$ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases.


in lesser quantities of pollutant emissions. This section addresses both project-specific impacts, and whether the project will make a cumulatively considerable contribution to cumulative air quality impacts; in each instance, the text makes clear whether the analysis addressed project-specific or cumulative impacts.

The proposed project would include residential and retail uses not typically associated with noxious odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people, and odors are not discussed further in this section.

**Impact AQ-1:** Construction of the proposed project would not violate an air quality standard or contribute to an existing or projected air quality violation, either individually or cumulatively. *(Less than Significant)*

Demolition, grading, and new construction activities would temporarily affect local air quality during project construction, causing temporary increases in criteria pollutants. These include emissions generated from construction activities, combustion emissions of criteria air pollutants (reactive organic gases [ROG], nitrogen oxides [NOx], carbon monoxide [CO], sulfur oxides [SOx], and PM$_{10}$ and PM$_{2.5}$) primarily from operation of construction equipment and worker vehicles, and evaporative emissions (ROG) from asphalt paving and architectural coating applications.
Construction-related emissions of criteria air pollutants and precursors were modeled in accordance with BAAQMD-recommended methodologies. Emissions of criteria air pollutants and precursors were modeled based on California Emissions Estimator Model (CalEEMod) defaults for construction equipment and the anticipated schedule for construction of the proposed project. The project applicant provided outlines of construction phasing and scheduling which were used to run CalEEMod. Construction would involve demolition of 4,900 sq. ft. of existing structures and construction of 165 residential units along with 41,900 sq. ft. of commercial/retail space and 185,000 sq. ft. of parking garage. Demolition and construction would occur over a 28-month period assumed to occur between January 1, 2012 and May 1, 2014.

Table IV.E-4 summarizes the modeled construction-related emissions of each criteria air pollutant and precursor. As shown in the table, construction-related emissions would be below the BAAQMD thresholds of significance. Thus, construction of the proposed project would have a less-than-significant effect on air quality standards.

Table IV.E-4: Estimated Average Daily Construction Emissions

<table>
<thead>
<tr>
<th></th>
<th>Projected Emissions (Pounds per Day)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>Average Daily Emissions</td>
<td>35.63</td>
</tr>
<tr>
<td>BAAQMD Threshold</td>
<td>54</td>
</tr>
</tbody>
</table>

Note: ¹ Emission factors were generated by the URBEMIS 2007 (v. 9.2.4) model for San Francisco County for summer conditions.

Source: Donald Ballanti, Criteria Air Pollutant Impact Report for the 8 Washington Street Project, San Francisco, April 2011.

Project emissions would not exceed the BAAQMD construction criteria air pollutant thresholds of significance. BAAQMD CEQA guidance provides that, if a project results in an increase in ROG, NOₓ, PM₂.₅, or PM₁₀ of more than their respective daily or annual mass thresholds, then it would also be considered to contribute considerably to a significant cumulative air quality impact. Since construction of the project would not exceed the daily mass emissions thresholds, the project would not contribute considerably to a significant cumulative effect with respect to construction-related criteria pollutant emissions, and cumulative construction criteria air pollutant impacts would be less than significant.

Impact AQ-2: The proposed project would not result in significant impacts related to fugitive dust resulting from project construction activities. (Less than Significant)

Project-related demolition, excavation, grading and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Dust can cause watering eyes or irritation to the lungs, nose, and throat. Demolition, excavation, grading and
other construction activities can cause wind-blown dust that adds to particulate matter in the local atmosphere. Depending on exposure, adverse health effects can occur due to this particulate matter in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

In response, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes called the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) with the intent of reducing the quantity of dust generated during site preparation, demolition, and construction work in order to protect the health of the general public and of on-site workers, minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI).

The Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco which have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. The Director of DBI may waive this requirement for activities on sites of less than one half-acre that are unlikely to result in any visible wind-blown dust. The project sponsor and the contractor responsible for construction activities at the project site are required to use practices to control construction dust on the site that result in dust control levels which are acceptable to the Director of DBI. Dust suppression activities may include watering all active construction areas sufficiently to prevent dust from becoming airborne; increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water must be used if required by Article 21, Section 1100 et seq. of the San Francisco Public Works Code. If not required, reclaimed water should be used whenever possible. Contractors shall provide as much water as necessary to control dust (without creating run-off in any area of land clearing, and/or earth movement.)

During excavation and dirt-moving activities, contractors shall wet sweep or vacuum the streets, sidewalks, paths, and intersections where work is in progress at the end of the workday. Inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, or soil shall be covered with a 10 mil (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques.

For project sites greater than one half-acre in size, such as the proposed project site, the Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Health Department. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement. Since sensitive receptors exist within 1,000 feet of the project’s construction activities, the project would be ineligible for a waiver of this requirement.
Site-specific Dust Control Plans under the Ordinance require the project sponsor to carry out the following tasks:

- Submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site;
- Wet down areas of soil at least three times per day;
- Provide an analysis of wind direction and install upwind and downwind particulate dust monitors;
- Record particulate monitoring results;
- Hire an independent, third party to conduct inspections and keep a record of those inspections;
- Establish shut-down conditions based on wind, soil migration, etc.;
- Establish a hotline for surrounding community members who may be potentially affected by project-related dust;
- Limit the area subject to construction activities at any one time;
- Install dust curtains and windbreaks on the property lines, as necessary;
- Limit the amount of soil in hauling trucks to the size of the truck bed and securing with a tarpaulin;
- Enforce a 15-mph speed limit for vehicles entering and exiting construction areas;
- Sweep affected streets with water sweepers at the end of the day;
- Install and utilize wheel washers to clean truck tires;
- Terminate construction activities when winds exceed 25 miles per hour; and
- Apply soil stabilizers to inactive areas; and sweep adjacent streets to reduce particulate emissions.

The Ordinance requires that the project sponsor designate an individual to monitor compliance with dust control requirements.

The above regulations and procedures set forth by the San Francisco Health Code would ensure that the BAAQMD-recommended Best Management Practices would be employed. According to the BAAQMD threshold of significance for construction impacts, implementation of these measures would ensure that construction dust impacts of the proposed project would be less than significant.

**Impact AQ-3: Construction of the proposed project would expose sensitive receptors to substantial levels of PM$_{2.5}$ and other TACs, including DPM. (Significant and Unavoidable)**

A refined assessment of construction health risk was performed to determine whether sensitive receptors would be exposed to a substantial incremental increase in TAC emissions that exceed
an incremental cancer risk of 10 in a million, an annual average PM$_{2.5}$ increase of 0.3 ug/m$^3$, or a chronic or acute hazard index (HI) of 1.0 at the maximally exposed individual (MEI). Additional details on this analysis are provided in Appendix B of the health risk analysis (HRA) technical memo.\(^8\)

Construction-related emissions of DPM (using exhaust PM$_{2.5}$ as a surrogate)\(^9\) and ROGs were estimated using the California Emissions Estimation Model (CalEEMod).\(^10\) CalEEMod is designed to estimate construction emissions for land use development projects, and allows for the input of project-specific information. It is based upon CARB-approved Off-Road and On-Road Mobile-Source Emission Factor models (OFFROAD and EMFAC, respectively).\(^11\)

The estimated mass emissions were entered into an air dispersion model (Industrial Source Complex Short-Term 3 (ISCST3)) to estimate ambient DPM and ROG concentrations associated with the project’s construction activities. Meteorological conditions used in ISCST3 included every combination of stability class and wind speed to identify worst-case conditions. Sensitive receptors in the vicinity of the project include adult and child residents, recreational park visitors, and daycare children. In accordance with the BAAQMD CEQA guidelines, the estimated excess cancer risks for child resident receptors were multiplied by an age sensitivity factor of 9.8, which is appropriate for the period of construction (approximately 28 months).

Diesel exhaust, as DPM, is the only TAC identified for inclusion in the cancer risk and chronic non-cancer hazard evaluation. Diesel exhaust, as a mixture, is identified by the State of California as a known carcinogen.\(^12\) However, under California regulatory guidelines, DPM is used as a surrogate measure of exposure for the mixture of chemicals that make up diesel exhaust as a whole.\(^13\) There is currently no acute non-cancer toxicity value available for DPM. Thus, speciated components of diesel TOGs (based on VOC as a surrogate) with acute toxicity values were included in the acute non-cancer hazard analysis.\(^14\)

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\(^8\) ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, March 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

\(^9\) On-site PM$_{2.5}$ is assumed to be equivalent to on-site DPM; this is a conservative assumption, as PM$_{2.5}$ constitutes only a fraction of DPM.

\(^10\) Available at: http://www.caleemod.com/

\(^11\) OFFROAD and EMFAC are also the basis for construction emission factors and estimation in the URBEMIS emissions estimation program; hence, the results will be similar using either software.

\(^12\) Cal/EPA, Air Resources Board. 2009. Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values. Office of Environmental Health Hazard Assessment. February.


\(^14\) ENVIRON received the speciation profile through email of Virginia Lau of BAAQMD on July 13, 2010 and is included as Appendix A of the HRA. ENVIRON verified that the speciation profile received was
Table IV.E-5 summarizes the cancer risk, noncancer hazard indices, and incremental PM$_{2.5}$ concentrations for off-site receptors generated by on-site construction activities. The excess cancer risk and incremental PM$_{2.5}$ concentrations at the maximally exposed individual due to project construction emissions exceed the significance thresholds. In contrast, acute and chronic noncancer hazard indices are below the significance thresholds. Therefore, mitigation measure M-AQ-3, below, has been incorporated into the proposed project to reduce construction-related health risks.

Table IV.E-5: Construction Health Risk Impacts

<table>
<thead>
<tr>
<th></th>
<th>Construction Equipment</th>
<th>Significance Threshold</th>
<th>Threshold Exceeded?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Risk (in a Million)</td>
<td>198</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>0.2</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Acute Hazard Index</td>
<td>0.5</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>PM$_{2.5}$($\mu$g/m$^3$)</td>
<td>0.95</td>
<td>0.3</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Source: ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, April 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.*

Mitigation Measure M-AQ-3 calls for all off-road construction equipment to be equipped with Tier 3 diesel engines or better. Because the analysis is based on default construction equipment and a site-specific construction equipment inventory was not available at the time of this analysis, it is not possible to quantify the resulting reduction in DPM for the mitigated scenario. However, even with implementation of the most effective measures to reduce DPM emissions, (which would occur if Level 3 VDECs were applied to all off-road construction equipment), construction health risks would not be mitigated to below the excess incremental cancer risk significance threshold of 10 in a million. Thus, even with all feasible mitigation, the project’s construction emissions would have a significant and unavoidable health risk impact to nearby sensitive receptors.
Mitigation M-AQ-3: Construction Equipment

All off-road construction equipment shall be equipped with Tier 3 (Tier 2 if greater than 750 hp) diesel engines or better. The following types of equipment were identified as candidates for retrofitting with CARB-certified Level 3 verified diesel emission controls (Level 3 VDECs, which are capable of reducing DPM emissions by 85% or better), due to their expected operating modes (i.e., fairly constant use at high revolution per minute):

- Excavators
- Backhoes
- Rubber-Tired Dozers
- Concrete Boom Pumps
- Concrete Trailer Pumps
- Concrete Placing Booms
- Soil Mix Drill Rigs
- Soldier Pile Rigs
- Shoring Drill Rigs

All diesel generators used for project construction must meet Tier 4 emissions standards.

As described previously, modeling default equipment inventories were used because site specific information not available at the time of this analysis; hence, the equipment listed above may or may not be used for the project. To the extent that the above listed types of equipment are used for project construction, those equipment types will be required to meet DPM emission standards equivalent to Tier 3 (Tier 2 if greater than 750 hp) engines with Level 3 VDECs, if feasible. For the purposes of this mitigation measure, “feasibility” refers to the availability of newer equipment in the subcontractor’s fleet that meets these standards, or the availability of older equipment in the subcontractor’s fleet that can be feasibly modified to incorporate Level 3 VDECs. It should be noted that for specialty equipment types (e.g. drill rigs, shoring rigs and concrete pumps) it may not be feasible for construction contractors to modify their current, older equipment to accommodate the particulate filters, or for them to provide newer models with these filters pre-installed. Therefore, this mitigation measure may be infeasible.

Should it be determined by the construction contractor or their subcontractors that compliance with the emissions control requirements of this mitigation measure is infeasible for any one of the above listed construction equipment, the construction contractor must demonstrate an alternative method of compliance that achieves an equivalent reduction in the project’s fleetwide DPM and other TAC emissions. If alternative means of compliance with the emissions exhaust requirements are further determined to be infeasible, the construction contractor must document,
to the satisfaction of the ERO, that the contractor has complied with this mitigation measure to the extent feasible and why full compliance with the mitigation measure is infeasible.

**Impact AQ-4:** Operation of the proposed project would not violate an air quality standard or make a cumulatively considerable contribution to an existing or projected air quality violation. (*Less than Significant*)

Operational emissions of criteria air pollutants were estimated using the URBEMIS 2007 model (version 9.2.4) for the expected project build-out and compared to BAAQMD significance thresholds. The model combines information on trip generation with vehicular emissions data specific to different types of trips in the San Francisco area (home-to-work, work-other, etc.) from the CARB’s EMFAC 2007 BURDEN model to create an estimated daily emissions burden for travel within the San Francisco Bay Area Air Basin. The estimates of average daily operational emissions for the proposed project used the CARB’s URBEMIS 2007 computer model and were based on project land use and trip generation information taken from the Transportation Study. The Transportation Study estimates that the non-auto modal split for the project is 67 percent, a level higher than could be attained in most of San Francisco, the Bay Area and most of California due to the concentration and close proximity of local and regional transit, places of employment, services, and other attractions in and near downtown San Francisco. Table IV.E-6 presents the emission modeling results.

The project would also include an emergency back-up diesel generator. Anticipated emissions from this source were estimated based on allowable hours of testing/maintenance and emission factors provided by the manufacturer.

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15 Donald Ballanti, *Criteria Air Pollutant Impact Report for the 8 Washington Street Project, San Francisco*, April 2011. A copy of this report is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

16 Trip generation and travel mode assumptions of the Transportation Study are based on the City and County of San Francisco Planning Department’s *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002.

17 ENVIRON, *8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts*, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.
As shown in Table IV.E-6, Project emissions would not exceed the BAAQMD operational thresholds of significance. Therefore, the proposed project’s operational criteria air pollutant emissions would be less than significant and the project would not result in significant air quality impacts with respect to violating an air quality standard or contributing to air quality violation.

Table IV.E-6: Estimated Daily and Annual Regional Emissions (2012)

<table>
<thead>
<tr>
<th>Daily Projected Emissions (Pounds per Day)</th>
<th>ROG</th>
<th>NOX</th>
<th>PM₁₀</th>
<th>PM₂.₅</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Area-Source Emissions</td>
<td>35.61</td>
<td>3.66</td>
<td>13.52</td>
<td>13.01</td>
</tr>
<tr>
<td>Project Mobile-Source (Vehicle) Emissions</td>
<td>9.58</td>
<td>15.55</td>
<td>17.55</td>
<td>3.33</td>
</tr>
<tr>
<td>Emergency Generator</td>
<td>0.10</td>
<td>11.80</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>Total</td>
<td>44.24</td>
<td>30.74</td>
<td>31.12</td>
<td>16.39</td>
</tr>
<tr>
<td>BAAQMD Threshold</td>
<td>54</td>
<td>54</td>
<td>82</td>
<td>54</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Annual Projected Emissions (Tons per Year)</th>
<th>ROG</th>
<th>NOX</th>
<th>PM₁₀</th>
<th>PM₂.₅</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Area-Source Emissions</td>
<td>2.74</td>
<td>0.37</td>
<td>0.55</td>
<td>0.53</td>
</tr>
<tr>
<td>Project Mobile-Source (Vehicle) Emissions</td>
<td>1.77</td>
<td>2.19</td>
<td>3.20</td>
<td>0.61</td>
</tr>
<tr>
<td>Emergency Generator</td>
<td>Neg.</td>
<td>0.27</td>
<td>Neg.</td>
<td>Neg.</td>
</tr>
<tr>
<td>Total</td>
<td>4.51</td>
<td>2.56</td>
<td>3.75</td>
<td>1.14</td>
</tr>
<tr>
<td>BAAQMD Threshold</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>

Notes: Neg: less than 0.005 tons/year

The BAAQMD CEQA guidance provides that, if a project results in an increase in ROG, NOx, PM₂.₅, or PM₁₀ of more than their respective daily mass emissions thresholds, then it would also be considered to contribute considerably to a significant cumulative effect. Since the project would not exceed the daily or annual mass thresholds, the project would not contribute considerably to a significant cumulative effect with respect to criteria air pollutant mass emissions from operational sources, and cumulative criteria air pollutant impacts would be less than significant.

Impact AQ-5: The proposed project would not result in substantial levels of CO and would not make a cumulatively considerable contribution to existing levels of CO. (Less than Significant)

The BAAQMD has developed a preliminary screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in CO emissions that exceed the CO thresholds of significance. For a development proposal, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:
• The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

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

Neither project nor cumulative development would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, and would not affect any intersections where vertical and/or horizontal mixing is substantially limited. Based on the BAAQMD criteria, the proposed project would have a less-than-significant impact on CO concentrations and would not result in a cumulatively considerable contribution to CO in the vicinity of the project.

Impact AQ-6: Operation of the proposed project would expose sensitive receptors to substantial levels of PM$_{2.5}$ and other TACs. (Less than Significant with Mitigation)

The proposed project would increase stationary source and mobile source emissions of PM$_{2.5}$ and TACs. The only potential stationary emission source identified is a 750 kW emergency diesel generator, which will emit diesel particulate matter (DPM) and volatile organic compounds (VOCs). Mobile source emissions of PM$_{2.5}$ and TACs will result from vehicles associated with the project’s proposed uses. Emissions from these sources were included in this analysis.

Emissions estimation, screening-level air dispersion modeling and a health risk assessment (HRA) were performed to evaluate the impact of the new stationary source on nearby receptors. The first step involved estimating annual toxic air contaminant (TAC) emissions and comparing these emission rates to BAAQMD’s risk trigger levels, i.e. the TAC emission rates below which no significant risks are anticipated. As described in greater detail in Appendix A of the HRA memo, emission rates were determined using equipment specifications and emission factors based on manufacturer specification literature, and an operation schedule based on an assumed 35 hours per year for emergency generator testing. The generator will perform at a level equivalent to a Tier 2 engine equipped with Level 3 verified diesel emission control (VDEC). Next, incremental ambient concentrations of DPM and VOCs from the emergency diesel generator were conservatively estimated using SCREEN3 air dispersion modeling software. These concentrations were then used to generate conservative estimates of excess lifetime cancer risk.

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18 It should be noted that under BAAQMD Regulation 2, Rule 5, Section 2-5-302, a project cannot construct or operate permitted sources that collectively generate an incremental cancer risk greater than 10 in a million, or a non-cancer hazard index greater than 1 (for either acute or chronic exposures). These limits are identical to the CEQA thresholds for operational sources.

19 Because the generator will be located below some of the on-site residences, those on-site receptors were also considered for this analysis.
and acute and chronic non-cancer HI values for nearby sensitive receptors. In accordance with the BAAQMD CEQA guidelines, the estimated excess lifetime cancer risks were multiplied by an age sensitivity factor of 1.7. DPM concentrations (for cancer risk and chronic non-cancer hazard index calculations) and VOC concentrations (for acute non-cancer hazard index calculations) were determined at different distances and heights relative to the generator emission stack, to evaluate impacts in locations where multi-level residential buildings are present. Additional details on the parameters and assumptions used in this risk assessment are provided in Appendix A of the HRA memo.

The impacts from vehicular emissions from project-generated traffic were evaluated through a screening analysis using BAAQMD roadway screening tables. For a conservative analysis, all project-generated trips are assumed to occur on the same roadway located 0 feet from the nearest offsite receptor. Screening values for risk, hazards and PM$_{2.5}$ concentrations were interpolated or extrapolated from the screening table values based on the traffic counts and distances from the site boundary.

Table IV.E-7 shows the maximum cancer risk, acute non-cancer hazard index, chronic non-cancer hazard index, and PM$_{2.5}$ concentration estimates associated with the on-site generator, assuming operation of the emergency generator as stated above, and the project’s mobile sources.

<table>
<thead>
<tr>
<th>Source</th>
<th>Stationary Source</th>
<th>Mobile Sources</th>
<th>Sum of Stationary and Mobile Sources</th>
<th>Threshold</th>
<th>Exceed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Risk (in a million)</td>
<td>6.8</td>
<td>2.3</td>
<td>9.1</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>0.003</td>
<td>0.01</td>
<td>0.02</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Acute Hazard Index</td>
<td>0.4</td>
<td>0.02</td>
<td>0.4</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>PM$_{2.5}$ (ug/m$^3$)</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.3</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

20 Acute non-cancer hazard was evaluated based on speciated VOC concentrations from diesel exhaust.
While emissions from the project’s mobile sources would not exceed the single source significance threshold, the proposed project would be designed to reduce automobile trips to the maximum extent feasible thereby reducing emissions from the project’s mobile sources. First, the proposed project would be located within a short walk of major transit lines serving both the City and the region. The proposed project would be in close proximity to the Downtown area, Chinatown, North Beach and the Waterfront, which would encourage residents and visitors to bicycle, walk and ride transit to and from the proposed project instead of taking trips via private automobile. Furthermore, the proposed project would comply with the Planning Code’s bicycle parking and car share parking requirements, which would further reduce private automobile trips and emissions from the project’s mobile sources. The proposed project would also comply with the City’s Commuter Benefits Ordinance as well as the Jobs-Housing Linkage Program, which is designed to provide housing for new office and commercial uses within San Francisco, thereby allowing employees to live close to their place of employment. The proposed project’s compliance with these measures and close proximity to transit, employment opportunities, shopping and Waterfront attractions would reduce automobile trips and thereby reduce emissions from mobile sources to the maximum extent feasible. As discussed above, non-auto trip assumptions for this area of the City are higher than could be attained in most of San Francisco, the Bay Area and California due to the concentration and close proximity of local and regional transit, places of employment, services, and other attractions in and near downtown San Francisco.

Should the project’s emergency generator operate for more than 35 hours per year or the project sponsor install a generator that does not meet an emissions standard equivalent to a Tier 2 engine equipped with a Level 3 verified diesel emission control device, health risk emissions from project operations would be greater than those reported in Table IV.E-7, resulting in a potentially significant health risk impact to nearby sensitive receptors. Therefore, mitigation measure M-AQ-6, below, has been identified to ensure that the proposed project’s emergency generator meets the emissions criteria and operating hours analyzed for the proposed project. With implementation of mitigation measure M-AQ-6, below, the project’s mobile and stationary source emissions would have a less than significant health risk impact on nearby sensitive receptors.

**Mitigation M-AQ-6: Emergency Generator Emissions Standards and Operating Hours**

To ensure that health risk impacts from the proposed project do not result in significant impacts to on- and off-site sensitive receptors, the project’s emergency generator shall meet the following requirements:

1. The project sponsor shall ensure that the emergency generator proposed as part of the project meets the emissions standards equivalent to a Tier 2 engine equipped with a Level 3 verified emissions control device; and
2. The project sponsor shall ensure that ongoing testing of this generator is limited to no more than 35 hours per year; and

3. The project sponsor shall maintain records of annual fuel use and operating hours and shall make those records available to the ERO upon request.

Impact AQ-7: The proposed project would expose new (on-site) sensitive receptors to significant levels of PM$_{2.5}$ and other TACs from a single source. (Significant and Unavoidable)

In accordance with BAAQMD CEQA Air Quality Guidelines, to determine the potential for a single source of emissions to cause adverse health risks to new residents at the project site, the project’s operational TAC sources are considered along with each existing source within the project vicinity. The BAAQMD CEQA Air Quality Guidelines define the zone of influence for considering single sources that might pose potential health risks as those within 1,000 feet of the project site. Three categories of TAC sources were identified within the project’s zone of influence: 1) Stationary sources, 2) Mobile sources, and 3) Emissions from the nearby ferry terminal. The methodology for analyzing each of these sources is described below.

1. Off-Site Stationary Sources

BAAQMD has developed a Stationary Source and Risk Analysis Tool ("BAAQMD Risk Analysis Tool") for permitted sources within the City and County of San Francisco\(^\text{22}\) to identify existing off-site stationary sources of TACs. Sixteen such sources were identified within 1,000 feet of the project; all but three emission units associated with these sources are identified as diesel generators. The other emission units are identified as non-diesel (natural gas) boilers; according to BAAQMD technical guidance document entitled “Recommended Methods for Screening and Modeling Local Risks and Hazards”,\(^\text{23}\) non-diesel boilers do not pose significant health impacts even when conducting a cumulative risk analysis, and thus can be excluded from further consideration for this single-source analysis.

BAAQMD provided screening-level cancer risks and chronic noncancer hazard estimates for the diesel generators, as well as “distance adjustment factors”, which are applied to adjust the risk estimates based on the distance between the existing and proposed project sources and receptors (see Appendix C of the HRA memo).


IV. Environmental Setting and Impacts
   E. Air Quality

2. Mobile (Roadway) Sources

The contribution of roadway emissions to exposure risk on receptors at the project site, was evaluated using BAAQMD roadway screening tables.24 The roadways to be included in the analysis were determined by reviewing two-way traffic data from San Francisco Municipal Transportation Agency for nearby roadways. Any roadway within a 1,000-foot radius of the site that has an annual average daily traffic (AADT) exceeding 10,000 was included in the analysis. In addition, any roadway within 1,000 feet of the site that would exceed 10,000 AADT after the addition of all project-generated trips was included in the analysis. Screening values for risk, hazards, and PM$_{2.5}$ concentrations were interpolated or extrapolated from the screening table values based on the traffic counts and distances from the site boundary.

3. Ferry Terminals

In addition to stationary sources and roadway sources, BAAQMD also recommends evaluating the contribution of certain types of facilities to the health risk on new receptors at a project site. Examples of such facilities include ports, truck terminals, rail yards, airports, and refineries. The project is located within 1,000 feet of the San Francisco Ferry Building, and Piers 1½, 3, 5 and 9. These facilities are frequented by diesel-fueled marine vessels, such as passenger cruise and commuter ferries; hence, diesel particulate emissions emitted while the vessels are in the vicinity of the project should be evaluated in the cancer risk assessment. A comparative analysis was conducted to estimate a range of cancer risks associated with these vessels, using vessel operational data and the results of health risk analyses for two local studies involving risks from ferry terminal vessel emissions. This comparative analysis and the related data and reports are presented in Appendix D of the HRA memo.

Table IV.E-8 shows the maximum impact of existing and proposed project individual stationary sources, roadway sources and ferry terminal sources (each considered as a single source for this analysis) on new on-site receptors. After adjusting the BAAQMD off-site diesel generator risk values for distance between the source and nearest on-site receptor, the maximum estimated cancer risk from a single off-site stationary source within 1,000-feet of the project boundary is 15.8 in a million; the noncancer hazard is 0.0006; and PM$_{2.5}$ concentration is 0.2 µg/m$^3$. Based on the screening assessment of nearby streets, roadway traffic from the Embarcadero alone would cause an exceedance of the BAAQMD’s lifetime cancer risk single-source threshold (i.e., 58 in a

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Table IV.E-8: Single-Source Risk and Hazards for New (on-site) Receptors

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Risk (in a million)</td>
<td>15.8</td>
<td>58</td>
<td>30</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>0.006</td>
<td>0.38</td>
<td>0.01</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>Acute Hazard Index</td>
<td>&lt;1</td>
<td>0.5</td>
<td>--*</td>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>PM$_{2.5}$ (µg/m$^3$)</td>
<td>0.2</td>
<td>0.4</td>
<td>0.06</td>
<td>0.3</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note:
*-- Insufficient data were available at the time this analysis was conducted to estimate acute noncancer hazard index.

Source: ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

As shown in Table IV.E-8, the maximum estimated single-source cancer risk for new residents due to an individual source within 1,000 feet of the project boundary exceeds the significance threshold of 10 in a million cancer risk and the significance threshold of 0.3 µg/m$^3$ for PM$_{2.5}$. Therefore, the proposed project would result in a significant health risk impact with respect to locating sensitive receptors near a single source of air pollutants. Additional, more refined risk modeling may show that risks from some individual sources may fall below the single source risk thresholds for some or all new on-site receptors. However, it is unlikely that refined modeling would conclude that all sources fall below the single source thresholds for all new on-site receptors. Therefore, the health risk impacts associated with siting sensitive receptors at the site near single sources of PM$_{2.5}$ and TACs is considered significant.

Mitigation measures may involve reducing emissions from the project or reducing a receptor’s exposure to emissions. The project does not have the ability to mitigate emissions from offsite emission sources. Offsite stationary source emission rates are regulated by BAAQMD through the operator’s air permits, while emission standards for vehicles and marine vessels are regulated...
by U.S. EPA and CARB. Furthermore, the project does not have legal authority to restrict the operation of offsite stationary and mobile sources as a means of reducing emissions. As previously noted for Impact AQ-6 above, the proposed project would reduce emissions from the proposed project’s emergency generator through implementation of mitigation measure M-AQ-6. Emissions from the proposed project’s mobile sources would be reduced to the maximum extent feasible through compliance with measures to reduce automobile trips to and from the project site. For example, as discussed above, the proposed project would comply with the Planning Code’s car share and bicycle parking requirements, as well as with the Jobs-Housing Linkage Program and the Commuter Benefits Ordinance, all of which are designed to reduce automobile trips. Furthermore, the proposed project is an urban infill development located in close proximity to transit, employment opportunities, shopping, and Waterfront attractions, which would encourage residents and visitors to walk, bicycle, and ride transit to and from the project, thereby reducing emissions from the project’s mobile sources. As discussed above, non-auto trip assumptions for this area of the City are higher than could be attained in most of San Francisco, the Bay Area and California due to the concentration and close proximity of local and regional transit, places of employment, services, and other attractions in and near downtown San Francisco.

Potential mitigation measures to reduce exposure for on-site receptors to emissions from on-site and off-site sources also include installation of mechanical ventilation with high-efficiency particulate air (HEPA) filters in project building ventilation systems, and planting trees at the site. The proposed project would be required to comply with Section 428 of the Planning Code which requires that the project sponsor install one box tree for every 20 feet of street frontage. The proposed project will comply with this Planning Code requirement. However, although tree planting may reduce certain risks at lower level units, trees may be ineffective for reducing risks to residents that reside on higher floors.

To further protect the project’s residential uses from nearby TAC’s the project shall implement Mitigation Measure M-AQ-7, below. This mitigation measure would reduce risk associated with DPM exposure only when the receptor is indoors at home and the ventilation system is in operation. When the receptor is not inside the residence, it is assumed to be outdoors adjacent to the residence. The ventilation system is assumed to operate when heat would be turned on in

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25 The use of air conditioning would also result in operation of the ventilation system. However, air conditioning is rarely used in San Francisco.
Table IV.E-9 shows the estimated reduction in risk and PM$_{2.5}$ resulting from Mitigation Measure M-AQ-7.\textsuperscript{26} As shown in Table IV.E-9, none of the maximum individual stationary, roadway or ferry terminal sources would fall below the 10 in a million risk threshold with mitigation. Despite implementation of all feasible means of reducing risks as part of the proposed project, including Mitigation Measure M-AQ-6, Mitigation Measure M-AQ-7, and the trip reduction measures, this potential impact relating to single-source risk on new receptors would remain significant and unavoidable.

Table IV.E-9: Mitigated Risk and PM$_{2.5}$ for New (on-site) Receptors

<table>
<thead>
<tr>
<th>Mitigated Maximum Individual Off-Site Stationary Source</th>
<th>Mitigated Maximum Individual Roadway Source</th>
<th>Mitigated Maximum Ferry Emissions</th>
<th>Exceed Single-Source Threshold?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Risk (in a million)</td>
<td>10</td>
<td>40</td>
<td>18</td>
</tr>
<tr>
<td>PM$_{2.5}$ (ug/m$^3$)</td>
<td>0.1</td>
<td>0.2</td>
<td>0.03</td>
</tr>
</tbody>
</table>

\textit{Source:} ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

\textbf{Mitigation M-AQ-7: Building Design and Ventilation Requirements}

The project sponsor shall submit a ventilation plan for the proposed buildings. The ventilation plan shall show that the building ventilation systems remove at least 80 percent of the PM$_{2.5}$ pollutants from habitable areas. The ventilation system shall be designed by an engineer certified by ASHRAE, who shall provide a written report documenting that the system offers the best available technology to minimize outdoor to indoor transmission of air pollution. In addition to installation of an air filtration system, the project sponsor shall present a plan that ensures ongoing maintenance for the ventilation and filtration systems. The project sponsor shall also ensure the disclosure to buyers and renters regarding the findings of the analysis and inform occupant’s proper use of any installed air filtration system.

\textsuperscript{26} ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.
Impact AQ-8: The proposed project would expose new (on-site) sensitive receptors to cumulatively considerable levels of PM$_{2.5}$ and other TACs from off-site and on-site sources.  (*Significant and Unavoidable*)

In accordance with BAAQMD CEQA Air Quality Guidelines for determining the cumulative effects on new receptors of area sources of PM$_{2.5}$ and TACs, Table IV.E-10 shows the cumulative health risks from stationary sources, roadway sources, and ferry terminal sources on new on-site receptors. As shown in Table IV.E-10, the estimated cumulative cancer risk for new residents due to the on-site sources, off-site stationary sources, roadway sources and ferry terminal sources within 1,000 feet of the project boundary exceeds the significance threshold of 100 in a million for cumulative impacts. The PM$_{2.5}$ concentration exceeds the significance threshold of 0.8 µg/m$^3$. The total estimated cancer risk, noncancer hazard, and PM$_{2.5}$ concentration from all sources within 1,000-feet of the project boundary is 146-174 in a million, 0.5, and 1.7-1.8 µg/m$^3$, respectively. The chronic non-cancer hazard index threshold is not exceeded. Therefore, the proposed project would result in a significant health risk impact with respect to locating sensitive receptors near multiple sources of air pollutants that exceed BAAQMD’s cumulative health risk thresholds.

Table IV.E-10: Cumulative Risk and Hazards for New (on-site) Receptors.

<table>
<thead>
<tr>
<th>Off-Site Stationary Sources</th>
<th>Roadways</th>
<th>Ferry/Port Sources</th>
<th>Project Stationary and Mobile Sources</th>
<th>Total</th>
<th>Cumulative Health Risk Threshold Exceed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer Risk (in a million)</td>
<td>64</td>
<td>71</td>
<td>2 to 30</td>
<td>9.1</td>
<td>146 to 174</td>
</tr>
<tr>
<td>Chronic Hazard Index</td>
<td>0.02</td>
<td>0.5</td>
<td>0.01</td>
<td>0.003</td>
<td>0.5</td>
</tr>
<tr>
<td>PM$_{2.5}$ (µg/m$^3$)</td>
<td>1.1</td>
<td>0.6</td>
<td>0.004 to 0.055</td>
<td>0.01</td>
<td>1.7 to 1.8</td>
</tr>
</tbody>
</table>

Source: ENVIRON, 8 Washington Street Project, Case Number 2007.0030E, Local Community Risk and Hazard Impacts, June 2011. A copy of this memo is on file as part of Case No. 2007.0030E and available for public review at the Planning Department, 1650 Mission Street, Suite 400.

Mitigation measures may involve reducing emissions or reducing a receptor’s exposure to emissions. Pursuant to Mitigation Measure M-AQ-6, the proposed project’s on-site generator will be operated for short periods only, and will perform at a level equivalent to a Tier 2 engine equipped with Level 3 VDEC; there is no additional feasible mitigation for this source. Emissions from the project’s mobile sources would be reduced as feasible by compliance with the bicycle parking and car share requirements of the Planning Code, as well as the Jobs-Housing Program and the Commuter Benefits Ordinance, all of which are designed to reduce trips by
private automobile. The proposed project’s close proximity to transit, employment opportunities, shopping, and Waterfront attractions would also encourage trips by transit, walking, and bicycling, thereby reducing emissions from mobile sources.

In addition, implementation of Mitigation Measure M-AQ-7 would reduce exposure of on-site residential uses to health risks to the degree feasible by requiring that the building’s ventilation systems reduce outdoor PM$_{2.5}$ level by at least 80 percent, reducing not only exposure to PM$_{2.5}$, but also reducing the potential for increased cancer risks at the site. The remaining, off-site sources are not within the control of the project sponsor or the City, and thus the Project does not have the ability to reduce emissions from these offsite sources. As shown previously in Table IV.E-9, the range of cumulative cancer risk and PM$_{2.5}$ would exceed their respective cumulative thresholds even with mitigation. Despite implementation of all feasible mitigation, the project would result in a significant and unavoidable impact with respect to exposing new sensitive receptors to sources of health risks.

**Impact AQ-9: Project operations would result in considerable contribution to already cumulatively significant levels of PM$_{2.5}$ and other TACs on off-site sensitive receptors. (Less than Significant with Mitigation)**

Due to their similar proximity to roadway sources, the nearest off-site sensitive receptors within 1,000 feet of the project boundary would be subject to the same level of risk from vehicle exhaust emissions as on-site receptors. In addition, because the nearest off-site receptors are immediately adjacent to the proposed project, the impact on off-site receptors from off-site stationary sources and from the ferry terminal will be similar to the impact on on-site receptors. Given that the sum of these three sources already exceeds 100 in a million, there would be a cumulatively significant impact to off-site sensitive receptors regardless of the risk contribution from the project. The proposed project's vehicle emissions and stationary source emissions could contribute additional health risks that exceed BAAQMD’s project-level thresholds of significance. Where potential health risks exceed the cumulative thresholds, the BAAQMD considers projects that result in an increase in health risks above the project-level thresholds to also result in a considerable contribution to cumulative health risk impacts.²⁷

As discussed in Impact AQ-6, the proposed project’s emergency backup generator would be required pursuant to Mitigation Measure M-AQ-6 to meet specified emissions standards and limit annual testing to 35 hours per year. Furthermore, emissions from the project’s mobile sources would be reduced as feasible through the compliance with the Planning Code’s bicycle parking and car share requirements, the Jobs-Housing Program, and the Commuter Benefits Ordinance,

²⁷ Personal communication between Jessica Range, Environmental Planning and Dave Vintze, BAAQMD. May 11, 2011. A copy of this communication is on file and available for public review at the Planning Department, 1650 Mission Street, Suite 400, San Francisco, Ca 94103, as part of Case File No. 2007.0030E.
all of which are designed to reduce trips by private automobile. Emissions from the project’s mobile sources would be further reduced by the project’s close proximity to transit, employment opportunities, shopping, and Waterfront attractions, which would encourage residents and visitors to take trips to and from the project site via walking, bicycling, and riding transit. Through implementation of Mitigation Measure M-AQ-6 and the project’s trip reduction measures, the combined sum of the project’s stationary source and mobile source health risk emissions would be mitigated to below the project level thresholds of: an incremental cancer risk of 10 in a million, annual average PM$_{2.5}$ levels below 0.3 µg/m$^3$ and a chronic and acute hazard index below 1.0. Therefore, with incorporation of Mitigation Measure M-AQ-6, the proposed project’s contribution to cumulative health risk impacts would be less than cumulatively considerable with mitigation.\textsuperscript{28}

**Impact AQ-10:** Project construction activities would result in a considerable contribution to cumulatively significant levels of PM$_{2.5}$ and other TACs on off-site receptors. \textit{(Significant and Unavoidable)}

As described above, operational emissions from roadways, ferry operations and off-site stationary sources total greater than 100 in a million excess cancer risk. In addition, as explained in Impact AQ-3, the estimated cancer risk from project construction is approximately 198 in a million, which by itself exceeds the BAAQMD cumulative construction health risk thresholds. Furthermore, the scheduling for project construction will coincide with nearby construction associated with the 34th America’s Cup project, which will also contribute to cumulative health risks. Hence, the sum of risks from project construction, off-site operational sources, and nearby America’s Cup construction will exceed the cumulative risk thresholds. Construction of the proposed project would exceed the project level thresholds for construction-related excess cancer risk and incremental annual average PM$_{2.5}$ levels; therefore construction of the proposed project would result in a considerable contribution to cumulatively significant health risks impact on off-site sensitive receptors.

Mitigation measures for project construction are described in Mitigation Measure M-AQ-3. No additional feasible mitigation, beyond that already identified in mitigation M-AQ-3, has been identified to reduce health risks to offsite receptors from project emissions; thus, this impact would be significant and unavoidable despite incorporation of all feasible mitigation.

**Impact AQ-11:** The proposed project would not conflict with or obstruct implementation of the 2010 Clean Air Plan. \textit{(Less than Significant)}

BAAQMD adopted the Bay Area 2010 Clean Air Plan (CAP) on September 15, 2010. The CAP provides a comprehensive plan to improve Bay Area air quality and protect public health. The

\textsuperscript{28} Ibid.
CAP defines a control strategy to: reduce emissions and decrease ambient concentrations of harmful pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and reduce greenhouse gas (GHG) emissions to protect the climate.

To these ends, the CAP recommends specific control measures and actions. The 2010 Clean Air Plan recognizes that to a great extent, community design dictates individual travel mode and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics and greenhouse gases from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand, and people have a range of viable transportation options. Of particular relevance to the proposed project is Transportation Control Measure (TCM) D-3-Local Land Use Strategies.

**TCM D-3 - Local Land Use Strategies**

TCM D-3 will support and promote land use patterns, policies and infrastructure investments that support higher density mixed use, residential and employment development near transit in order to facilitate walking, bicycling and transit use...This measure will reduce emissions of the key ozone precursors, ROG and NOx by promoting land use patterns, policies, and infrastructure investments that support higher densities and job creation near transit that facilitate walking, bicycling and transit use. In addition, the measure will reduce emissions of particulate matter, air toxics and greenhouse gases.29

The proposed project would be consistent with the type of development promoted by the CAPs TCM for Local Land Use Strategies. The proposed project would replace an existing private tennis and swim club and surface parking lot at the edge of San Francisco’s downtown financial district, with a dense, mixed-use, urban infill project. It would place 165 new residential units, parking, an athletic club, retail, and restaurant uses within convenient walking distance to and from a concentration of regional and local transit service, places of employment, services and other attractions. Other TCMs applicable to the proposed project include TCM D-1 and D-2, which encourage the improvement of bicycle and pedestrian access and facilities in residential areas and around activity centers. Consistent with these TCMs, the proposed project would include improvements to the bicycle circulation system and the pedestrian realm around and through the project site to promote connectivity and thereby encourage walking, transit use, and bicycling.

For these reasons, the proposed does not conflict with the 2010 Clean Air Plan.

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F. GREENHOUSE GASES

This section provides a description of global climate change, greenhouse gas (GHG) emissions, the existing regulatory framework governing GHG emissions, and an analysis of the potential impacts related to GHGs associated with implementation of the proposed project. The proposed project is evaluated for compliance with San Francisco’s Strategies to Address Greenhouse Gas Emissions, recognized as meeting the criteria of a Qualified GHG Reduction Strategy by the Bay Area Air Quality Management District (BAAQMD).

SETTING

SOURCES OF GREENHOUSE GAS EMISSIONS

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the earth, similar to a greenhouse. The accumulation of GHGs has been implicated as a driving force for global climate change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth’s climate caused by natural fluctuations and anthropogenic activities (i.e., activities relating to, or resulting from, the influence of human beings) that alter the composition of the global atmosphere.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operational phases. The primary GHGs associated with land use development projects are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Although the presence of the primary GHGs in the atmosphere is naturally occurring, CO₂, CH₄, and N₂O are largely emitted from human activities, accelerating the rate at which these compounds accumulate in the earth’s atmosphere. Emissions of CO₂ are largely byproducts of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Other GHGs, with much greater heat-absorption potential than CO₂, include hydrofluorocarbons (HFCs), perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. CO₂ is the “reference gas” for GHG emissions, meaning that emissions of total GHGs are typically reported in “carbon dioxide equivalent” (CO₂E).¹

There is international scientific consensus that human-caused increases in GHGs have contributed, and will continue to contribute, to global warming, although there is uncertainty concerning the magnitude and rate of the warming. Potential global warming impacts in

¹ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in terms of “carbon dioxide-equivalent” (CO₂E) to account for each gas’s heat absorption or global warming potential.
California may include a decrease in snowpack, sea level rise, more extreme heat days per year, more high ozone days, increased frequency and intensity of wildfires, and more drought years. Secondary effects are likely to include a global rise in sea level, impacts on agriculture, water resources, changes in disease vectors, and changes in habitat and biodiversity.

The California Air Resources Board (ARB) estimated that in 2008 California produced about 478 million metric tonnes of CO$_2$E (MMTCO$_2$E) (about 525 million short tons) GHG emissions. The ARB inventory for California shows that transportation is the source of 37 percent of the State’s GHG emissions, followed by electricity generation (both in-State and out-of-State) at 24 percent and industrial sources at 19 percent. Commercial and residential fuel use (primarily for heating) accounted for 9 percent of GHG emissions. In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial/commercial sector were the two largest sources of GHG emissions, each accounting for about 36 percent of the Bay Area’s 95.8 MMTCO$_2$E (105.4 million short tons) of GHG emissions in 2007. Industrial and commercial sources (including office and retail uses) were the second largest contributors of GHG emissions with about 34 percent of total emissions. Electricity generation accounts for approximately 16 percent of the Bay Area’s GHG emissions, followed by residential fuel usage (e.g., home water heaters, furnaces, etc.) at 7 percent, off-road equipment at 3 percent, and agriculture at 12 percent. Oil refining currently accounts for more than 40 percent of the industrial-sector GHG emissions, or approximately 15 percent of the total Bay Area GHG emissions.

REGULATORY FRAMEWORK

Federal

U.S. Supreme Court Ruling on Greenhouse Gases as Air Pollutants

The U.S. Environmental Protection Agency (U.S. EPA) is the Federal agency responsible for implementing the Clean Air Act (CAA). The U.S. Supreme Court ruled on April 2, 2007 that

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3 One metric tonne (MT) is 1,000 kilograms or 2,204.6 pounds or 1.1 short tons. One short ton is 2,000 pounds. The abbreviation for “million metric tonnes” is MMT; thus, million metric tons of CO$_2$-equivalent (MMTCO$_2$E).


IV. Environmental Setting and Impacts

F. Greenhouse Gases

CO₂ is an air pollutant as defined under the CAA, and that the U.S. EPA has the authority to regulate emissions of GHGs.⁶ At this time, there are no Federal regulations or policies regarding GHG emissions directly applicable to the proposed project. (See discussion of Assembly Bill [AB] 1493 for further information on the U.S. EPA granting a waiver of Federal CAA preemption to California.)

**State**

**California Air Resources Board**

The passage of the Global Warming Solutions Act of 2006, or Assembly Bill No. 32 (AB 32), gave the ARB broad responsibility for promulgating regulations designed to achieve the general goals of reducing GHG from sources and activities under its jurisdiction. (For a discussion of AB 32, see “Assembly Bill 32 and the California Climate Change Scoping Plan,” below.)

**Assembly Bill 1493**

Assembly Bill (AB) 1493 (sponsored by Fran Pavley of the State Assembly in 2002) required that ARB develop and adopt regulations that achieve “the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by ARB to be vehicles whose primary use is noncommercial personal transportation in the State.” Because the Pavley standards imposed stricter mobile source standards than those under the Federal CAA, California applied to the U.S. EPA for a waiver under the CAA; this waiver was granted in 2009.⁷ California is also preparing to harmonize its standards with new Federal GHG and Corporate Average Fuel Economy standards for a single national standard.⁸

**Executive Order S-3-05**

In 2005, Executive Order S-3-05 set forth a series of target dates by which statewide GHGs emissions would be progressively reduced: by 2010, reduce GHG emissions to 2000 levels; by

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2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. 

Assembly Bill 32 and the California Climate Change Scoping Plan

In 2006, the California legislature passed AB 32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

Pursuant to AB 32, ARB adopted a Scoping Plan in December 2008, outlining measures to meet the 2020 GHG reduction limits. In order to meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels, or about 15 percent from today’s levels. The Scoping Plan estimates a reduction of 174 MMTCO₂E (about 191 million short tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors (see Table IV.F-1: GHG Reductions from the AB 32 Scoping Plan Sectors). ARB has identified an implementation timeline for the GHG reduction strategies in the Scoping Plan. Some measures may require new legislation to implement, some will require subsidies, some have already been developed, and some will require additional effort to evaluate and quantify. Additionally, some emissions reductions strategies may require their own environmental review under CEQA or the National Environmental Policy Act (NEPA).

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions. ARB has identified a GHG reduction target of 15 percent from current levels for local governments themselves and notes that successful implementation of the plan relies on local governments’ land use planning and urban growth decisions. This is because local

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10 A March 2011 ruling of the San Francisco Superior Court enjoined some aspects of the Scoping Plan because of what the court considered to be defects in the environmental document prepared to review the plan’s significant impacts, particularly impacts with regard to the so called “cap and trade” program. The ruling does not affect implementation of local measures or ordinances by the City and County of San Francisco. (Association of Irritated Residents et al. v. California Air Resources Board, San Francisco Superior Court Case No. CPF-09-509562.)


Table IV.F-1: GHG Reductions from the AB 32 Scoping Plan Sectors

<table>
<thead>
<tr>
<th>GHG Reduction Measures By Sector</th>
<th>GHG Reductions (MMT CO₂E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation Sector</td>
<td>62.3</td>
</tr>
<tr>
<td>Electricity and Natural Gas</td>
<td>49.7</td>
</tr>
<tr>
<td>Industry</td>
<td>1.4</td>
</tr>
<tr>
<td>Landfill Methane Control Measure (Discrete Early Action)</td>
<td>1</td>
</tr>
<tr>
<td>Forestry</td>
<td>5</td>
</tr>
<tr>
<td>High Global Warming Potential GHGs</td>
<td>20.2</td>
</tr>
<tr>
<td>Additional Reductions Needed to Achieve the GHG Cap</td>
<td>34.4</td>
</tr>
<tr>
<td><strong>Total Reductions Counted Towards 2020 Target</strong></td>
<td><strong>174</strong></td>
</tr>
</tbody>
</table>

Other Recommended Measures

- Government Operations: 1.2
- Agriculture- Methane Capture at Large Dairies: 1
- Methane Capture at Large Dairies: 1
- Additional GHG Reduction Measures
- Water: 4.8
- Green Buildings: 26
- High Recycling/ Zero Waste
  - Commercial Recycling
  - Composting: 9
  - Anaerobic Digestion
  - Extended Producer Responsibility
  - Environmentally Preferable Purchasing
- **Total Reductions from Other Measures**: 42.8-43.8


governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. The Scoping Plan also relies on the requirements of Senate Bill (SB) 375 of 2008 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

**Executive Order S-1-07**

Executive Order S-1-07 of 2007 proclaims that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order establishes a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed ARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. ARB adopted the Low Carbon Fuel Standard on April 23, 2009.
Senate Bill 1078 and 107 and Executive Order S-14-08 and S-21-09

California established aggressive renewable energy standards under SB 1078 (Chapter 516, Statutes of 2002) and SB 107 (Chapter 464, Statutes of 2006), which 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 2010. Executive Order S-14-08 of November 2008 expanded the State’s Renewable Portfolio Standard (RPS) to 33 percent of electricity from renewable sources by 2020, and in September 2009, Executive Order S-21-09 directed ARB under its AB 32 authority to enact regulations to help the State meet the 33 percent RPS goal. Legislation signed in April 2011, Senate Bill 2 of the First Extraordinary Session, codified the statewide 33 percent RPS and set goals for interim years between 2011 and 2020.

Senate Bill 1368

SB 1368 (September 2006) is a companion bill of AB 32 that required the California Public Utilities Commission (PUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities. The California Energy Commission (CEC) was required to establish a similar standard for local publicly owned utilities. These regulations (20 CCR 2900) established in 2007 prohibit utilities from entering into long-term contracts with any baseload power plant that would emit more than the equivalent GHG performance of a typical combined-cycle natural-gas-fired plant. The legislation ensures that all new contracts for electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the PUC and CEC.

Senate Bill 97

SB 97, signed in August 2007, acknowledged that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor’s Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for evaluating the effects of GHG emissions and identifying feasible mitigation for GHG emissions, as required by CEQA. The California Natural Resources Agency subsequently adopted the State CEQA Guidelines amendments on December 30, 2009. These State CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions, and the amendments to the State CEQA Guidelines became effective March 18, 2010.

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13 The City and County of San Francisco community choice aggregation program, “CleanPowerSF,” was registered in May 2010 and is administered by the San Francisco Public Utilities Commission.
Senate Bill 375

In addition to policy directly guided by AB 32, the California legislature passed SB 375 in 2008 to require regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires regional transportation plans developed by each of the state’s 18 Metropolitan Planning Organizations (MPOs) to incorporate a “sustainable communities strategy (SCS)” in each regional transportation plan (RTP) that will achieve GHG emission reduction targets set by ARB. In the Bay Area, the Metropolitan Transportation Commission (MTC) is the MPO. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. MTC’s 2013 RTP will be its first plan subject to SB 375.

ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO’s SCS or “alternative planning strategy (APS)” for consistency with its assigned targets. If MPOs do not meet the GHG emissions reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation cycle from five years to eight years for local governments located within an MPO that meets certain requirements. City and county land use policies (including general plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, categorized as “transit priority projects.”

Regional/City/Local

Bay Area Air Quality Management District Climate Protection Program

The Bay Area Air Quality Management District (BAAQMD) is the primary agency responsible for air quality regulation in the nine-county San Francisco Bay Area Air Basin (SFBAAB). The BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the San Francisco Bay Area Air Basin. The climate protection program includes measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative sources of energy, all of which assist in reducing emissions of GHGs and in reducing air pollutants that affect the health of residents. BAAQMD also seeks to
support current climate protection programs in the region and to stimulate additional efforts through public education and outreach, technical assistance to local governments and other interested parties, and promotion of collaborative efforts among stakeholders. In June 2010, BAAQMD adopted revised CEQA significance thresholds for GHG emissions. These recently adopted GHG significance thresholds are discussed in detail under “Methodology” below.

City and County of San Francisco Greenhouse Gas Reduction Strategy

Consistent with State CEQA Guidelines Section 15183.5, BAAQMD has adopted a qualitative GHG threshold of significance that allows a lead agency to determine that a project’s contribution of GHG emissions is less than significant if the lead agency finds that the project is consistent with a Qualified Greenhouse Gas Reduction Strategy, as defined in the BAAQMD CEQA Air Quality Guidelines.

The City and County of San Francisco has a history of environmental protection policies and programs aimed at improving the quality of life for residents and reducing impacts on the environment. The City’s Strategies to Address Greenhouse Gas Emissions is a comprehensive assessment of policies, programs, and ordinances. BAAQMD reviewed this document and concluded that the strategy meets the criteria for a Qualified GHG Reduction Strategy as outlined in BAAQMD CEQA Air Quality Guidelines.

The following plans, policies, and legislation demonstrate the City and County of San Francisco’s continued commitment to environmental protection. They include measures applicable to this project that would decrease the amount of GHGs emitted into the atmosphere and thus decrease San Francisco’s overall contribution to climate change. These programs are collectively referred to as San Francisco’s GHG Reduction Strategy.

City and County of San Francisco Plans, Policies, and Programs

Transit First Policy

In 1973, the City instituted the Transit First Policy, which added Article 8A, Section 8A.115 to the City Charter with the goal of reducing San Francisco’s reliance on freeways and meeting transportation needs by emphasizing mass transportation. The Transit First Policy gives priority to public transit investments; adopts street capacity and parking policies to discourage increased automobile traffic; and encourages the use of transit, bicycling, and walking instead of single-occupant vehicles.

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IV. Environmental Setting and Impacts
   F. Greenhouse Gases

San Francisco Sustainability Plan

In July 1997, the Board of Supervisors endorsed the Sustainability Plan for the City and County of San Francisco, which establishes sustainable development as a fundamental goal of municipal public policy.

Electricity Resource Plan (Revised December 2002)

The City adopted the Electricity Resource Plan to help address growing environmental health concerns in San Francisco’s southeast community, the site of two power plants. The plan presents a framework for ensuring a reliable, affordable, and renewable source of energy for the future of San Francisco.

Climate Action Plan for San Francisco

In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution (Number 158-02) that set a goal for the City to reduce GHG emissions to 20 percent below 1990 levels by the year 2012. In September 2004, the San Francisco Department of the Environment and San Francisco Public Utilities Commission published the Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions.\textsuperscript{15} This climate action plan provides the context of climate change in San Francisco and examines strategies to meet the 20 percent GHG emissions reduction target. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the plan, and many of the actions require further development and commitment of resources, the plan serves as a blueprint for GHG emissions reductions, and several actions have been implemented or are now in progress.

San Francisco Municipal Transportation Agency’s Zero Emissions 2020 Plan

The Zero Emissions 2020 Plan focuses on the purchase of cleaner emission transit buses, including hybrid diesel-electric buses. Under this plan, hybrid buses will replace the oldest diesel buses, some dating back to 1988. The hybrid buses emit 95 percent less particulate matter (soot) than the buses they replace, produce 40 percent less nitrogen oxides, and reduce GHGs by 30 percent.

Zero Waste

In 2004, the City committed to a goal of diverting 75 percent of its waste from landfills by 2010, with the ultimate goal of zero waste by 2020. San Francisco currently recovers 77 percent of discarded material.\(^{16}\)

GoSolarSF

On July 1, 2008, the San Francisco Public Utilities Commission launched its “GoSolarSF” program to San Francisco’s businesses and residents, offering incentives in the form of a rebate program that could pay for approximately half the cost of installation of a solar power system and more to those qualifying as low-income residents.

The San Francisco Planning Department and the San Francisco Department of Building Inspection have also developed a streamlining process for solar photovoltaic permits and priority permitting mechanisms for projects pursuing Gold certification under the Leadership in Energy and Environmental Design Green Building Rating System™ (LEED\(^\text{®}\)).

The San Francisco Planning Code reflects the latest smart growth policies and includes electric vehicle refueling stations in City parking garages, bicycle storage facilities for commercial and office buildings, and zoning that is supportive of high-density mixed-use infill development. The City’s more recent area plans, such as the Rincon Hill Area Plan and the Market and Octavia Area Plan, provide transit-oriented development policies that allow for neighborhood-oriented retail services and limit off-street parking to accessory parking spaces.\(^{17}\) At the same time, there is a communitywide focus on ensuring that San Francisco’s neighborhoods are “livable,” reflected in the San Francisco Better Streets Plan, which would improve streetscape policies throughout the City; the Transit Effectiveness Project, which aims to improve transit service; and the San Francisco Bicycle Plan. All of these plans and projects are intended to promote alternative transportation options for residents and visitors.

Local Ordinances

Construction and Demolition Debris Recovery Ordinance

In 2006, the City adopted Ordinance No. 27-06, requiring all construction and demolition debris to be transported to a registered facility that can divert a minimum of 65 percent of the material


\(^{17}\) See San Francisco Planning Code Sections 206.4 and 155.
Greenhouse Gas Reduction Ordinance

In May 2008, the City adopted an ordinance amending the San Francisco Environment Code to establish GHG emissions targets and departmental action plans, to authorize the San Francisco Department of the Environment to coordinate efforts to meet these targets, and to make environmental findings. The ordinance establishes the following GHG emissions reduction limits for San Francisco and the target dates by which to achieve them:

- Determine 1990 City GHG emissions by 2008, the baseline level with reference to which target reductions are set.
- Reduce GHG emissions by 25 percent below 1990 levels by 2017.
- Reduce GHG emissions by 40 percent below 1990 levels by 2025.
- Reduce GHG emissions by 80 percent below 1990 levels by 2050.

The ordinance also specifies requirements for City departments to prepare climate action plans that assess GHG emissions associated with their activities and with the activities they regulate, report the results of those assessments to the San Francisco Department of the Environment, and prepare recommendations to reduce emissions. In particular, the San Francisco Planning Department is required to (1) update and amend the City’s applicable General Plan elements to include the emissions reduction limits set forth in this ordinance and policies to achieve those targets; (2) consider a project’s impact on the City’s GHG emissions reduction limits specified in this ordinance as part of its review under CEQA; and (3) work with other City departments to enhance the Transit First Policy to encourage a shift to sustainable modes of transportation, thereby reducing emissions and helping to achieve the targets set forth by the ordinance.

City and County of San Francisco’s Green Building Ordinance

On August 4, 2008, San Francisco’s Green Building Ordinance became law for newly constructed residential and commercial buildings and renovations to existing buildings. The ordinance specifically requires newly constructed commercial buildings over 5,000 square feet, residential buildings over 75 feet in height, and renovations on buildings over 25,000 square feet to be subject to an unprecedented level of required LEED® Green Building Rating System™ certifications, which makes San Francisco the city with the most stringent green building requirements in the nation. Cumulative benefits of this ordinance include reducing CO₂ emissions by 60,000 tons, saving 220,000 megawatt-hours of power, saving 100 million gallons of drinking water, reducing waste and stormwater by 90 million gallons, reducing construction and demolition waste by 700 million pounds, increasing the valuations of recycled materials by
$200 million, reducing 540,000 automobile trips, and increasing generation of green power by 37,000 megawatt-hours.18

The Green Building Ordinance also continues San Francisco’s efforts to reduce local GHG emissions to 20 percent below 1990 levels by the year 2012, a goal outlined in the City’s 2004 Climate Action Plan. In addition, by reducing San Francisco’s emissions, this ordinance furthers efforts to reduce GHG emissions statewide, as mandated by the California Global Warming Solutions Act of 2006.

The City has also passed ordinances to reduce waste from retail and commercial operations. Ordinance 295-06, the Food Waste Reduction Ordinance, prohibits the use of polystyrene foam disposable food serviceware and requires restaurants, retail food vendors, City departments, and City contractors to use biodegradable/compostable or recyclable food serviceware. Ordinance 81-07, the Plastic Bag Reduction Ordinance, requires stores located within the City to use compostable plastic, recyclable paper, and/or reusable checkout bags.

City and County of San Francisco Commuter Benefits Ordinance

The City adopted an ordinance, effective January 19, 2009, that allows commuters to deduct a specified amount per month, pretax, for transit and vanpool expenses. These commuter benefits must be offered by any employer with 20 employees or more that operates within the City. To qualify for these benefits, employees must work at least 10 hours per week averaged over a calendar month. Although not required by the ordinance, employers can offer the commuter benefits to employees who work fewer than 10 hours per week averaged over a month.

City and County of San Francisco Mandatory Recycling and Composting Ordinance

The City adopted an ordinance, effective October 21, 2009, that requires all businesses and residences to compost food scraps and biodegradable products. Businesses and residents are provided with green, blue, and black bins to sort their food and other biodegradable waste, recycling, and trash, respectively. Businesses and residences that do not comply with the ordinance are subject to fines, depending on the level and duration of noncompliance. A moratorium on fines will be in place until July 2011 for owners and tenants of multi-family buildings and multi-tenant commercial buildings to allow time to adjust to the mandatory recycling and composting.

18 These findings are contained within the final Green Building Ordinance, signed by the Mayor on August 4, 2008.
Independent Review of the San Francisco Community GHG Inventory

San Francisco has been actively pursuing cleaner energy, alternative transportation, and solid waste policies, many of which have been codified into regulations as discussed above. An independent review of San Francisco’s communitywide emissions shows that San Francisco has achieved a 5 percent reduction in communitywide GHG emissions below the Kyoto Protocol 1990 baseline levels. The 1997 Kyoto Protocol sets a GHG reduction target of 7 percent below 1990 levels by 2012. The “communitywide inventory” includes GHG emissions generated by San Francisco—from residents, businesses, and commuters as well as from municipal operations. The inventory also includes emissions from both transportation and building energy sources.19

IMPACTS

SIGNIFICANCE THRESHOLDS

The proposed project would result in a significant adverse impact on GHG emissions if it would:

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

METHODOLOGY

The 2010 amendments to the State CEQA Guidelines adopted by the California Natural Resources Agency as well as the BAAQMD CEQA Air Quality Guidelines and BAAQMD-recommended thresholds of significance have been incorporated into this analysis accordingly and serve as the foundation for the methodology of this analysis. As discussed above, the BAAQMD adopted thresholds of significance for CEQA analysis of GHG emissions, and consistent with State CEQA Guidelines Section 15183.5, BAAQMD adopted a qualitative GHG threshold of significance that allows a lead agency to determine that a project’s contribution of GHG emissions is less than significant if the lead agency finds that the project is consistent with a Qualified Greenhouse Gas Reduction Strategy, as defined in the BAAQMD CEQA Air Quality Guidelines.

The City’s GHG reduction strategy identifies a number of mandatory requirements and incentives that have measurably reduced greenhouse gas emissions including, but not limited to, measures to increase the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of a green building strategy, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City’s transportation fleet (including buses and taxis), and a mandatory composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project’s GHG emissions.

Based on the City’s actions to pursue cleaner energy, energy conservation, alternative transportation, and solid waste policies, the City’s Strategies to Address Greenhouse Gas Emissions has resulted in a reduction in greenhouse gas emissions below 1990 levels, meeting statewide AB 32 GHG reduction goals. The communitywide and municipal GHG emissions were approximately 8.26 MMTCO2E in 1990, and for 2005, GHG emissions were estimated at 7.82 MMTCO2E, representing an approximately 5.3 percent reduction in GHG emissions below 1990 levels.

As stated above, BAAQMD reviewed the City’s Strategies to Address Greenhouse Gas Emissions and concluded that the strategy meets the criteria for a Qualified GHG Reduction Strategy as outlined in BAAQMD CEQA Air Quality Guidelines. BAAQMD stated that San Francisco’s “aggressive GHG reduction targets and comprehensive strategies help the Bay Area move toward reaching the State’s AB 32 goals, and also serve as a model from which other communities can learn.”

Based on the BAAQMD CEQA Air Quality Guidelines, projects that are consistent with San Francisco’s Strategies to Address Greenhouse Gas Emissions would result in a less-than-significant impact with respect to GHG emissions. Furthermore, because San Francisco’s strategy is consistent with AB 32 goals, projects that are consistent with San Francisco’s strategy would also not conflict with the State’s plan for reducing GHG emissions. As discussed in San Francisco’s Strategies to Address Greenhouse Gas Emissions, new development and renovations/alterations for private projects and municipal projects are required to comply with San Francisco’s ordinances that reduce GHG emissions.

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The following analysis of the proposed project’s climate change impact focuses on the project’s contribution to a cumulatively significant global impact through its emission of GHGs. Given the analysis is in a cumulative context, this section does not include an individual, project-specific impact statement.

**IMPACT EVALUATION**

**Impact GG-1: The proposed project would generate greenhouse gas emissions, but not in levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)**

The most common GHGs resulting from human activity are CO₂, CH₄, and N₂O.²² State law defines GHGs to also include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These latter GHG compounds are usually emitted in industrial processes, and therefore are not applicable to the proposed project. Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHGs during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers, energy required to pump, treat, and convey water, and emissions associated with landfill operations.

The proposed project would increase the activity on site by placing new residential uses on the site. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and residential and commercial operations associated with energy use, water use and wastewater treatment, and solid waste disposal. Construction activities would also result in an increase in GHG emissions.

Depending on a proposed project’s size, use, and location, a variety of controls are in place to ensure that a proposed project would not impair the State’s ability to meet Statewide GHG reduction targets outlined in AB 32, nor impact the City’s ability to meet San Francisco’s local GHG reduction targets. Given that (1) San Francisco has implemented regulations to reduce GHG emissions specific to new construction and renovations of private developments and municipal projects; (2) San Francisco’s sustainable policies have resulted in the measured success of reduced GHG emissions levels; (3) San Francisco has met and exceeded AB 32 GHG reduction goals for the year 2020; (4) current and probable future State and local greenhouse gas

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reduction measures will continue to reduce a project’s contribution to climate change; and (5) San Francisco’s **Strategies to Address Greenhouse Gas Emissions** meet BAAQMD’s requirements for a Qualified GHG Reduction Strategy, projects that are consistent with San Francisco’s regulations would not contribute significantly to global climate change. The proposed project would be required to comply with these requirements, and was determined to be consistent with San Francisco’s **Strategies to Address Greenhouse Gas Emissions**.\(^{23}\) As such, the proposed project would result in a less-than-significant impact with respect to GHG emissions.

\(^{23}\) City of San Francisco Planning Department, *GHG Analysis Compliance Checklist*, for 8 Washington Street Project, April 19, 2011.
G. SHADOW

This section describes the proposed project’s shadow impacts on parks, publicly accessible open spaces, and recreation facilities in the vicinity of the project site. The Setting discussion identifies existing public and private open spaces and recreation facilities, describes applicable government regulations related to shadow impacts, and describes existing shadows on existing public and private open spaces and recreation facilities. The Impacts discussion lists the significance criteria that are applied to determine if shadow impacts are significant under CEQA, analyzes the shadows impacts of the proposed project and cumulative development projects, and identifies mitigation and improvement measures.

In order to determine whether any publicly accessible open spaces, recreation facilities, or parks could be potentially affected by project shadow, the Planning Department prepared a “shadow fan” diagram. The shadow fan plots the maximum potential reach of project shadow over the course of a year (from 1 hour after sunrise until 1 hour before sunset on each day of the year), as well as the locations of nearby open spaces, recreation facilities, and parks. The shadow fan accounts for topographical changes but not for existing shadows cast by existing buildings. The shadow fan is used by the Planning Department as the basis for initially identifying which open spaces, recreation facilities, and parks under the jurisdiction of the San Francisco Recreation and Park Commission merit further study. Those that are outside the maximum potential reach of project shadow do not require further study.

SETTING

PUBLIC OPEN SPACES AND RECREATION FACILITIES

There are several public open spaces and recreation facilities in the vicinity of the project site (see Figure IV.G-1: Existing Open Spaces in the Project Site Vicinity). Some of these properties are under the jurisdiction of the Recreation and Park Commission, while others are under the jurisdiction of other government agencies or privately owned. Figure IV.G-2: Existing and Project Shadows at 8:12 AM PDT on March 21, through Figure IV.G-21: Existing and Project Shadows at 3:54 PM PST on December 21, presented later in this section on pp. IV.G.13-IV.G.32, show existing shadows cast by existing buildings (light gray) and net new shadow cast by the proposed project (dark gray).
The Embarkade (Herb Caen Way)

FIGURE IV.G-1: EXISTING OPEN SPACES IN THE PROJECT SITE VICINITY

Source: Turnstone Consulting
Recreation and Park Commission Properties

Sue Bierman Park

Sue Bierman Park is an approximately 4-acre park that covers two city blocks. The eastern block (Assessor’s Block 202) of Sue Bierman Park is bounded by Washington Street on the north, The Embarcadero on the east, Clay Street and Justin Herman Plaza on the south, and Drumm Street on the west. Trees line the perimeter of the block, and other amenities include lawns, paved walkways, seating areas, and a space frame structure in the original park design. In late 2010, a renovation project was undertaken to reorient the pedestrian walkways, re-landscape the park, and remove the space frame structure. At the time of publication of this DEIR, the Block 203 portion of the park is fenced and work is ongoing. It is expected to reopen in June of 2011.

The western block (Assessor’s Block 203) of Sue Bierman Park is bounded by Washington Street on the north, Drumm Street on the east, Clay Street on the south, and Davis Street on the west. The western block slopes upward from east to west, but the northern perimeter is at street grade and is generally flat. A network of walkways, stairs, and terraces meanders up the slope to meet a pedestrian bridge crossing Davis Street to Maritime Plaza. The western block has been densely planted with trees, and other amenities include lawns, paved walkways, and seating areas. In late 2010, a renovation project was undertaken to reorient the pedestrian walkways, re-landscape the park, and remove the space frame structure in the eastern block. At the time of publication of this DEIR, the western block, Block 203, is fenced and work is ongoing. It is expected to reopen in June of 2011.

Prior to 2001, this park, which was formerly known as Embarcadero Plaza I and Ferry Park, consisted of the northern portion (Lot 18) of Assessor’s Block 202. The southern portion (Lots 6, 14, and 15) of Assessor’s Block 202 was occupied by a segment of the Clay Street on-ramp to the Embarcadero Freeway, which was demolished after the 1989 Loma Prieta earthquake. The State of California conveyed ownership of these parcels to the City and County of San Francisco in 1991. Jurisdiction over these lots was transferred by ordinance from the Department of Public Works to the Recreation and Park Department in May 2001, thus expanding the area of the park. Subsequently, the name of the park on Block 202 was changed from Ferry Park to Sue Bierman Park.

Prior to 2008, Assessor’s Block 203 was not part of Sue Bierman Park. Assessor’s Block 203 was formerly part of the right-of-way occupied by the Clay Street on-ramp to the Embarcadero Freeway, which was demolished after the 1989 Loma Prieta earthquake. The State of California

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1 The Recreation and Park Department plans to remove the pedestrian bridge. See San Francisco Recreation and Park Department, Capital Plan – 2006 Update, p. 39.
conveyed ownership of these parcels to the City and County of San Francisco in 1991. Jurisdiction over this parcel was transferred by ordinance from the Department of Public Works to the Recreation and Park Department in April 2008, thus further expanding Sue Bierman Park to its current size and configuration. The northeastern corner of this block (Lot 13) is not part of Sue Bierman Park. This parcel, which is occupied by a one-story building housing a wastewater pump station and a maintenance facility, is under the jurisdiction of the San Francisco Public Utilities Commission.

In 1989, when Sue Bierman Park consisted of the northern portion of Assessor’s Block 202, the Planning Commission and the Recreation and Park Commission established an absolute cumulative shadow limit of zero percent pursuant to Planning Code Section 295, meaning that no net new shadow from proposed buildings exceeding 40 feet in height could be cast on the park. Absolute cumulative shadow limits were never adopted for the southern portion of Assessor’s Block 202 or for Assessor’s Block 203. No absolute cumulative shadow limit has been adopted for Sue Bierman Park in its current size and configuration. On an annual basis, Sue Bierman Park has the potential to receive 659,443,341 square-foot-hours of sunlight. Approximately 265,992,877 square-foot-hours (40.3 percent) are consumed by shadows from existing buildings.

During the spring and autumn, Sue Bierman Park is shadowed by existing buildings for much of the day. In the morning (approximately 10:00 AM), the western block is almost completely shadowed, and the southwest corner of the eastern block is shadowed (see Figures IV.G-3 and IV.G-13). At noon, approximately three-quarters of the western block is in shadow, and the western third of the eastern block is in shadow (see Figures IV.G-4 and IV.G-14). In the afternoon (approximately 3:00 PM), the southern two-thirds of both blocks is shadowed (see Figures IV.G-5 and IV.G-15). At the end of the day, both blocks are almost completely shadowed (see Figures IV.G-6 and IV.G-16).

During the summer, the park is mostly without shadows for much of the day. In the morning (approximately 10:00 AM), the southern perimeter of the western block is in shadow (see

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2 See the discussion under Regulatory Framework on p. IV.G.10.
3 A previous proposal to develop the project site with a mixed-use project was reviewed by the Recreation and Park Commission and the Planning Commission. On December 18, 2003, the Recreation and Park Commission held a public hearing to review the shadow impacts of the previous project and made the following recommendation to the Planning Commission: determine that the shadow impact on Embarcadero Plaza I (Sue Bierman Park (Block 202)) would be de minimis (smaller than the statistical margin of error) and that the shadow impact on Ferry Park (Sue Bierman Park (Block 203)) would not be significant or adverse (Resolution No. 0312-010). On February 5, 2004, the Planning Commission held a public hearing to review the shadow impacts of the previous project. The Planning Commission determined that the shadow impact on Embarcadero Plaza I (47.26 annual net new square-foot-hours) would be de minimis (Motion No. 16723) and that the shadow impact on Ferry Park (17,935 annual net new square-foot-hours) would not be significant or adverse (Motion No. 16724).
Figure IV.G-8). At noon, the southern perimeter of the western block and the southwest corner of the eastern block are shadowed (see Figure IV.G-9). In the afternoon (approximately 3:00 PM), the southeast corner of the eastern block is in shadow (see Figure IV.G-10). As the day progresses, shadows on both blocks increase until both blocks are completely shadowed at the end of the day (see Figure IV.G-11).

During the winter, the park is shadowed by existing buildings for much of the day. The shadows begin at sunrise and cover most of the western block and the southwest corner of the eastern block (see Figures IV.G-17 and IV.G-18). At noon, the western block is almost completely shadowed, while approximately half of the eastern block is shadowed (see Figure IV.G-19). By the end of the day, both blocks are completely shadowed (see Figures IV.G-20 through IV.G-21).

**Maritime Plaza**

Maritime Plaza, which is under the jurisdiction of the Recreation and Park Commission, is an above-grade open space on the roof of the parking garage of the Alcoa Building at 300 Clay Street. The plaza includes benches, tables, landscaping, and a lawn area.

In 1989, the Planning Commission and the Recreation and Park Commission established an absolute cumulative shadow limit of zero percent, meaning that no net new shadow from proposed buildings exceeding 40 feet in height could be cast on Maritime Plaza.4

During the spring, autumn, and winter, the plaza is mostly or completely shadowed throughout the day (see Figures IV.G-2 through IV.G-6 and Figures IV.G-12 through IV.G-21, which show the eastern two-thirds of Maritime Plaza closest to the project site).

During the summer, the plaza is almost completely shadowed in the early morning and in the late afternoon. As shown on Figures IV.G-8 through IV.G-10, the plaza is mostly without shadows from mid-morning (approximately 10:00 AM) until mid-afternoon (approximately 3:00 PM).

**Justin Herman Plaza**

Justin Herman Plaza is an approximately 161,679-square-foot hardscaped plaza on the west side of The Embarcadero across from the Ferry Building. It includes tables, chairs, and a water sculpture known as the Vaillancourt Fountain. The plaza is suitable for passive recreation such as sitting and strolling, and it is often used for events such as concerts and rallies.

In 1989, the Planning Commission and the Recreation and Park Commission established an absolute cumulative shadow limit of 0.1 percent,5 meaning that some net new shadow from

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4 See the discussion under Regulatory Framework on p. IV.G.10.
proposed buildings exceeding 40 feet in height could be cast on Justin Herman Plaza until the absolute cumulative shadow limit is reached.\(^6\)

During the spring, summer, and autumn, the plaza is shadowed by existing buildings in the early morning and in the afternoon. The shadows begin at sunrise and recede as the day progresses, moving off the plaza at approximately 9:00 AM (see Figures IV.G-2, IV.G-3, IV.G-7, IV.G-8, IV.G-12, and IV.G-13). The shadows return at approximately 2:00 PM and remain until the end of the day. By the end of the day, almost the entire plaza is shadowed (see Figures IV.G-6, IV.G-11, and IV.G-16).

During the winter, the plaza is shadowed by existing buildings for much of the day. The shadows begin at approximately 9:00 AM and remain until the end of the day. By the end of the day, almost the entire plaza is shadowed (see Figure IV.G-21).

**Publicly Accessible Open Space**

There are several open spaces that are publicly accessible but are not under the jurisdiction of the Recreation and Park Commission. These open spaces are owned by other government agencies, such as the Department of Public Works and the Port of San Francisco, or are privately owned.

**Pier 7**

Pier 7, which is on the east side of The Embarcadero between Pacific Avenue and Broadway, extends approximately 900 feet into San Francisco Bay. The pier includes benches and lighting, and it is suitable for passive recreation such as sitting and strolling.

During the spring, summer, and autumn, the pier is not shadowed by existing buildings at any time during the day (see Figures IV.G-2 through IV.G-16).

During the winter, the pier is shadowed by existing buildings in the morning and again in the afternoon. The shadows begin at approximately 10:00 AM and recede as the day progresses, moving off the pier around noon (see Figures IV.G-18 and IV.G.19). The shadows return at approximately 3:30 PM and remain until the end of the day (see Figures IV.G-20 and IV.G-21).

**The Embarcadero Promenade**

The Embarcadero Promenade (also called Herb Caen Way) is a waterfront pedestrian promenade that runs along the east side of The Embarcadero. It is over 3 miles long and extends from

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\(^5\) 0.1 percent of the total square-foot-hours of theoretical sunlight that reach the park on an annual basis.

\(^6\) See the discussion under Regulatory Framework on p. IV.G.10.
Fisherman’s Wharf to China Basin. The Embarcadero Promenade is identified as an “Open Space and Public Access” site in the *Waterfront Land Use Plan* and the Waterfront Design and Access Element of that plan.\(^7\) It is a public open space resource that functions both as a pedestrian corridor and as a waterfront open space destination, attracting downtown office workers, tourists, and residents. The segment that is opposite the project site functions more as a pedestrian corridor and less as an open space destination, because visual access to San Francisco Bay from this segment is blocked by the Piers 1-5 bulkhead buildings at the water’s edge.

During the spring, summer, and autumn, various portions of the promenade are shadowed by existing buildings in the early morning and in the late afternoon. The shadows begin at sunrise and recede as the day progresses, moving off the promenade at approximately 10:00 AM (see Figures IV.G-3, IV.G-8, and IV.G-13). The shadows return in the late afternoon (at approximately 4:00 PM during the spring and autumn and at approximately 5:00 PM during the summer) and remain until the end of the day (see Figures IV.G-5, IV.G-6, IV.G-10, IV.G-11, IV.G-15, and IV.G–16).

During the winter, the promenade is shadowed by existing buildings for much of the day. The shadows begin at sunrise and recede as the day progresses, moving off the promenade at approximately 10:00 AM (see Figure IV.G-18). The shadows return around noon and remain until the end of the day (see Figures IV.G-19 through IV.G-21).

**Harry Bridges Plaza**

Harry Bridges Plaza is a plaza in the middle of The Embarcadero right-of-way directly across from the Ferry Building. The plaza includes palm trees and two 50-foot-tall lamp sculptures, and the base of each lamp sculpture can be used for seating.

During the spring, summer, and autumn, the plaza is shadowed by existing buildings in the early morning and in the late afternoon. The shadows begin at sunrise and recede as the day progresses, moving off the plaza at approximately 10:00 AM (see Figures IV.G-3, IV.G-8, and IV.G-13). The shadows return at approximately 4:00 PM and remain until the end of the day (see Figures IV.G-5, IV.G-6, IV.G-10, IV.G-11, IV.G-15, and IV.G-16).

During the winter, the plaza is shadowed by existing buildings for much of the day. The shadows begin at sunrise and recede as the day progresses, moving off the plaza at approximately 9:00 AM (see Figures IV.G-17 and IV.G-18). The shadows return at approximately 11:00 AM and remain until the end of the day (see Figures IV.G-18 through IV.G-21).

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Port Walk Promenade

The Port Walk Promenade is a pedestrian promenade along the water’s edge on the Bay side of the Ferry Building and Piers 1-5. The promenade includes benches and tables.

During the spring, summer, and autumn, different portions of the promenade are shadowed by existing buildings primarily in the early morning and in the late afternoon. The shadows begin at sunrise, recede as the day progresses, return at approximately 3:00 PM, and remain until the end of the day (see Figures IV.G-2 through IV.G-16). At the end of the day, most of the promenade is shadowed (see Figures IV.G-6, IV.G-11, and IV.G-16).

During the winter, most of the promenade is shadowed by existing buildings throughout the day. The promenade receives the most sunlight from approximately 10:00 AM until noon (see Figures IV.G-18 and IV.G-19).

Sydney Walton Square

Sydney Walton Square is a 2-acre park bounded by Pacific Avenue on the north, Davis Street on the east, Jackson Street on the south, and Front Street on the west. The park is privately owned and maintained by Golden Gateway Center. It is accessible to the public seven days a week. The park includes an outdoor sculpture collection, seating areas, paved walkways, landscaping, and grassy areas for passive recreation such as sitting and strolling.

During the spring and autumn, portions of the park are shadowed by existing buildings throughout the day. When the shadows begin at sunrise, approximately two-thirds of the park is shadowed. From 10:00 AM until 3:00 PM, no more than one-quarter of the park is shadowed (see Figures IV.G-3 through IV.G-5 and Figures IV.G-13 through IV.G-15). The park receives the most sunlight during this time. After 3:00 PM, the shadows steadily increase until they cover approximately three-quarters of the park at the end of the day (see Figures IV.G-6 and IV.G-16).

During the summer, the park is shadowed by existing buildings in the early morning and in the late afternoon. On June 21, the shadows begin at sunrise and recede as the day progresses, moving off the park at approximately 10:00 AM (see Figures IV.G-7 through IV.G-9). From approximately 10:00 AM until approximately 3:30 PM, almost the entire park is sunny. The shadows return at approximately 3:30 PM and remain until the end of the day (see Figure IV.G-10). By the end of the day, approximately two-thirds of the park is shadowed (see Figure IV.G-11).

During the winter, the park is shadowed by existing buildings throughout the day. At noon, approximately one-third of the park is without shadows (see Figure IV.G-19). The park is mostly...
or completely shadowed at all other times of the day (see Figures IV.G-17, IV.G.18, IV.G-20, and IV.G-21).

**Drumm Street Pedestrian Path**

Drumm Street, which runs north-south, terminates at its intersection with Jackson Street. With a slight offset to the west, the line of Drumm Street is continued on the north side of Jackson Street west of the project site in the form of a paved pedestrian path that also serves as a utility easement. This pedestrian path, which runs from Jackson Street to The Embarcadero, is landscaped with grass and trees.

During the spring, summer, and autumn, the pedestrian path is sunny in the morning (see Figures IV.G-2 through IV.G-4, Figures IV.G-7 through IV.G-9, and Figures IV.G-12 through IV.G-14). Almost the entire length of the pedestrian path is shadowed by existing buildings in the late afternoon. The shadows begin at approximately 3:00 PM and remain until the end of the day (see Figures IV.G-5, IV.G-6, IV.G-10, IV.G-11, IV.G-15, and IV.G-16).

During the winter, the pedestrian path is shadowed by existing buildings in the late morning until the end of the day, with the shadows beginning at approximately 11:00 AM and remaining until the end of the day (see Figures IV.G-17 through IV.G-21).

**Existing On-Site Recreation and Open Spaces**

The project site includes existing private open space in the form of an open space at the eastern terminus of Pacific Avenue, nine outdoor tennis courts, and two outdoor swimming pools.

**Publicly Accessible Open Space at Eastern Terminus of Pacific Avenue Mall**

At the eastern terminus of the Pacific Avenue Mall, there is an existing open space immediately west and north of the northernmost tennis court (see Figure IV.G-1). It is privately owned by the Golden Gateway Tennis & Swim Club, but is outside of the existing tennis court fencing and, as such, it is accessible to the public. This open space is approximately 5,650 square feet.

During the spring, summer, and autumn, the open space is shadowed by existing buildings in the late afternoon. The shadows begin at approximately 3:00 PM during the spring and autumn and at approximately 4:00 PM during the summer and remain until the end of the day (see Figures IV.G-5, IV.G-6, IV.G-10, IV.G-11, IV.G-15, and IV.G-16).

During the winter, the open space is shadowed by existing buildings from early afternoon until the end of the day. The shadows begin around noon and remain until the end of the day (see Figures IV.G-19 through IV.G-21).
Golden Gateway Tennis & Swim Club

The Golden Gateway Tennis & Swim Club, which occupies most of the project site, is a private recreation facility that includes nine outdoor tennis courts and two outdoor swimming pools (see Figure IV.G-1).

During the spring, summer, and autumn, there is little to no shadow on the tennis courts and swimming pools for most of the day. Shadows from existing buildings reach the tennis courts and swimming pools in the late afternoon (approximately 3:00 PM) and remain until the end of the day. By the end of the day, the tennis courts and swimming pools are completely shadowed (see Figures IV.G-2 through IV.G-16).

During the winter, the tennis courts and swimming pools are shadowed by existing buildings from the late morning until the end of the day. Shortly after 10:00 AM, shadows from existing buildings begin to reach the tennis courts. By 3:00 PM, the tennis courts and swimming pools are completely shadowed and remain completely shadowed until the end of the day (see Figures IV.G-17 through IV.G-21).

REGULATORY FRAMEWORK

San Francisco Planning Code

Section 295

In 1984, San Francisco voters approved an initiative known as “Proposition K, The Sunlight Ordinance,” which was codified in 1985 as Section 295 of the Planning Code. Section 295 prohibits the approval of “any structure that would cast any shade or shadow upon any property under the jurisdiction of, or designated for acquisition by, the Recreation and Park Commission” unless the Planning Commission, with review and comment by the Recreation and Park Commission, has found that the shadows cast by the proposed project would not have a significant impact on the use of the property. Section 295 does not apply to structures that do not exceed 40 feet in height. The period analyzed is from the first hour after sunrise until the last hour before sunset.

Although the City and County of San Francisco has not formally adopted significance thresholds under CEQA for impacts related to shadow, for the purposes of CEQA, the Planning Department uses Section 295 criteria to evaluate the significance of project shadow impacts on outdoor recreation facilities or other public areas under Recreation and Park Commission jurisdiction. The Planning Commission and the Recreation and Park Commission have adopted criteria for determining the significance of shadow impacts under Section 295 for 14 parks in the general
downtown area, setting absolute cumulative shadow limits for those properties. The absolute cumulative shadow limits for specific properties are described earlier in the Setting discussion.

For parks that do not have absolute cumulative shadow limits, such as Block 203 of Sue Bierman Park, qualitative criteria (the time of day and the time of year during which the shadow occurs, how the affected areas of the park are used, how much sunlight the park would continue to receive) are used to determine the significance of a project’s shadow impacts.

IMPACTS

SIGNIFICANCE THRESHOLDS

The City and County of San Francisco has not formally adopted significance thresholds for impacts related to shadow. The Planning Department Initial Study Checklist form provides a framework of topics to be considered in evaluating potential impacts under CEQA. Implementation of a project could have a potentially significant impact related to shadow if the project were to:

- Affect, in an adverse manner, the use of any park or open space under the jurisdiction of or designated for acquisition by the Recreation and Park Commission;
- Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.

METHODOLOGY

An independent consultant, CADP, developed a computer shadow model using proprietary software, site survey data, and project data. The model accounts for topographical conditions as well as shadows cast by existing structures, but it does not account for shadows cast by existing trees. The model produces a spreadsheet that quantifies, in square-foot-hours, the amount of shadow cast by existing buildings, the amount of net new shadow cast by the proposed project, and the remaining amount of sunlight on the subject open space. These data are sampled at 15-minute intervals beginning on the summer solstice and then once a week for half a year until the winter solstice. The shadow calculations serve as the basis for the quantitative discussion of shadow impacts.

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9 The shadow calculations are available for public review at the Planning Department, 1650 Mission Street, Suite 400, in the files for Case No. 2007.0030K.
10 It is not necessary to sample the other half of the year (from the winter solstice to the summer solstice), because shadow behaves symmetrically about the solstices, yielding the same values in reverse order.
Using a computer program that accounts for the heights of existing and proposed buildings as well as topographical data, shadow diagrams have been prepared by CADP for the open spaces that would be affected by the proposed project. Fog, rain, and shadows from trees, existing or proposed, are not taken into account. Shadow diagrams are “snapshots” taken at a particular representative time of day and day of the year. They illustrate the extent and location of shadows cast by existing buildings, net new shadow from a proposed development project, and the remaining sunlight on the subject open space. A series of shadow diagrams from the same day demonstrates how the shadow moves across the space over a specific period of time. Shadow diagrams presented on pp. IV.G.13- IV.G.32 serve as the basis for the qualitative discussion of shadow impacts.
FIGURE IV.G-2: EXISTING AND PROJECT
SHADOWS AT 8:12 AM PDT ON MARCH 21

SOURCE: CADP Associates, Turnstone Consulting
FIGURE IV.G-15: EXISTING AND PROJECT SHADOWS AT 3:00 PM PDT ON SEPTEMBER 21
IMPACT EVALUATION

The shadow fan indicates that shadow from the proposed project could not reach Justin Herman Plaza or Pier 7. The shadow calculations prepared by CADP confirmed that the proposed project would not cast net new shadow on Maritime Plaza, and the shadow projections prepared by CADP confirmed that the proposed project would not cast net new shadow on Harry Bridges Plaza. On this basis, further discussion of Maritime Plaza, Justin Herman Plaza, Pier 7, and Harry Bridges Plaza is not necessary.

The following discussion describes the shadow impacts of the proposed project on the following open spaces: Sue Bierman Park (which is subject to Section 295), the Embarcadero Promenade, the Port Walk Promenade, Sydney Walton Square, the Drumm Street pedestrian path, and three proposed on-site open spaces (Jackson Common, Pacific Avenue Park, and the private Golden Gateway Tennis & Swim Club).

Figure IV.G-2: Existing and Project Shadows at 8:12 AM PDT on March 21, through Figure IV.G-21: Existing and Project Shadows at 3:54 PM PST on December 21, on pp. IV.G.13-IV.G.32 show existing shadows cast by existing buildings (light gray) and net new shadow cast by the proposed project (dark gray). Net new shadow from the proposed project is discussed below.

Impact SH-1: The proposed project would not adversely affect the use of any park or open space under the jurisdiction of the Recreation and Park Commission. (Less than Significant)

Sue Bierman Park

On an annual basis, Sue Bierman Park receives 659,443,341 square-foot-hours of potential sunlight. Approximately 265,992,877 square-foot-hours (40.3 percent) are consumed by shadows from existing buildings. On an annual basis, the proposed project would cast 6,928 square-foot-hours of net new shadow on the park. This amount of net new shadow represents 0.001 percent of the annual available sunlight on Sue Bierman Park.

The net new shadow would occur in the early morning from early June through mid-July (Block 203) and in the early evening from early June through mid-July (Block 202) for approximately 15 minutes each day. The proposed project would not cast net new shadow on Sue Bierman Park at any other time of the year.

On June 21, the morning shadow from the proposed project would begin at 6:47 AM and would move off the park at approximately 7:00 AM. The affected area of Sue Bierman Park would be the northern perimeter of the western block, which includes a paved walkway and some trees. This area of the park is not ideal for active or passive recreation, as it is near the perimeter of the...
park and does not provide much physical separation from the sidewalk or the street. In terms of area, the largest morning shadow from the proposed project would occur at 6:47 AM on June 21, when 688 square feet along the northern perimeter of the western block would be shadowed (see Figure IV.G-7).

On June 21, the evening shadow from the proposed project would begin at 6:15 PM, be obscured by shadows from existing buildings at approximately 6:30 PM, and reappear at 7:36 PM for approximately 1 minute.\(^\text{11}\) The affected area of Sue Bierman Park would be the northeast corner of the eastern block, which includes a paved walkway, a widened sidewalk, and some trees (see Figure IV.G-11). This area of the park is not ideal for active or passive recreation, as it is near the perimeter of the park and does not provide much physical separation from the sidewalk or the street. In terms of area, the largest evening shadow from the proposed project would occur at 6:15 PM on June 28, when 472 square feet in the northeast corner of the eastern block would be shadowed adjacent to the northern sidewalk (see Figure IV.G-22: Maximum Extent of Project Shadow on Sue Bierman Park (Block 202) at 6:15 PM PDT on June 28).

If the proposed project were constructed, Sue Bierman Park would continue to receive 6 to 8 hours of sunlight each day during the spring and autumn and 8 to 10 hours of sunlight each day during the summer. Sue Bierman Park would continue to receive 4 to 5 hours of sunlight each day during the winter when the days are coldest and shortest. Considering the amount of net new shadow that would occur, the time of day and the time of year during which the net new shadow would occur, the short duration of the net new shadow, and how the affected areas of the park are used, the proposed project would not adversely affect the use of Sue Bierman Park for active or passive recreation. For these reasons, the shadow impact of the proposed project on Sue Bierman Park would be considered less than significant, and no mitigation measures are required.\(^\text{12}\)

**Impact SH-2:** The proposed project would not create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas. (*Less than Significant*)

The Embarcadero Promenade

Throughout the year, the Embarcadero Promenade (Herb Caen Way) is shadowed by existing buildings in the early morning and in the late afternoon. During the spring and autumn, the

\(^{11}\) Pursuant to Section 295, shadow impacts are analyzed from 1 hour after sunrise until 1 hour before sunset. On June 21, 1 hour before sunset occurs at 7:36 PM.

\(^{12}\) The determination required under Section 295 will be made at the time the project is considered for approval.
FIGURE IV.G-22: MAXIMUM EXTENT OF PROJECT SHADOW ON SUE BIERMAN PARK (BLOCK 202) AT 6:15 PM PDT ON JUNE 28
proposed project would cast net new shadow on a portion of the Embarcadero Promenade in front of Pier 1 at the end of the day (see Figures IV.G-6 and IV.G-16). During the summer, the proposed project would cast net new shadow on the portion of the Embarcadero Promenade in front of Pier 1 and the Ferry Building toward the end of the day. On June 21, project shadows would reach the Embarcadero Promenade shortly after 7:00 PM (see Figure IV.G-23: Existing and Project Shadows at 7:00 PM PDT on June 21) and remain until the end of the day (see Figure IV.G-11). During the winter, the proposed project would cast net new shadow on the portion of the Embarcadero Promenade in front of Pier 3 at the end of the day (see Figure IV.G-21).

If the proposed project were constructed, the Embarcadero Promenade would continue to receive 8 to 10 hours of sunlight each day during the spring, summer, and autumn. During the winter when the days are coldest and shortest, the Embarcadero Promenade would continue to receive at least 3 to 4 hours of sunlight each day. As cyclists, in-line skaters, pedestrians, and runners move along the Embarcadero Promenade, they constantly move from areas of sun to areas of shadow and back to areas of sun. Their enjoyment of the Embarcadero Promenade is not dependent upon access to sunlight. For these reasons, the shadow impact of the proposed project on the Embarcadero Promenade would be considered less than significant, and no mitigation measures are required.

**Port Walk Promenade**

During the spring and autumn, the proposed project would not cast net new shadow on the Port Walk Promenade (see Figures IV.G-2 through IV.G-6 and Figures IV.G-12 through IV.G-16). During the summer and winter, the proposed project would cast net new shadow on the Port Walk Promenade toward the end of the day. On June 21, the net new shadow would cover portions of the Port Walk Promenade between Piers 1 and 1-1/2 at 7:36 PM (see Figure IV.G-11). On December 21, the net new shadow would cover the central portion of Pier 3, which is used as a surface parking lot, at 3:54 PM (see Figure IV.G-21).

During the spring, summer, and autumn, the Port Walk Promenade would continue to receive 8 to 10 hours of sunlight each day. During the winter when the days are coldest and shortest, the Port Walk Promenade would continue to receive 4 to 6 hours of sunlight each day. Considering the amount of sunlight that would reach the Port Walk Promenade throughout the year, the shadows from the proposed project would not substantially affect the use of the Port Walk Promenade for passive recreation such as sitting and strolling. For these reasons, the shadow impact of the proposed project on the Port Walk Promenade would be considered less than significant, and no mitigation measures are required.
IV. Environmental Setting and Impacts
G. Shadow

Sydney Walton Square

The proposed project would cast net new shadow on Sydney Walton Square in the early morning from early February through mid-April and from late August through early November. As shown on Figures IV.G-2, IV.G-3, IV.G-12, and IV.G-13, the net new shadow would fall on an area extending from the central western portion of the park to the southeast corner of the park. The affected areas of the park include seating areas, pedestrian walkways, landscaping, and grassy areas. The shadow would begin at sunrise and last a maximum of 45 minutes. The proposed project would not cast net new shadow on Sydney Walton Square after 8:45 AM during the months specified above. In terms of area, the largest shadow would occur at 8:03 AM on September 27, when 17,106 square feet in the central western portion and the southeast corner of the park would be shadowed (see Figure IV.G.-24: Maximum Extent of Project Shadow on Sydney Walton Square at 8:03 AM PDT on September 27).

Sydney Walton Square is used primarily for passive recreation activities such as sitting and strolling, but a small number of park users participate in active recreation activities such as tai chi and Frisbee. On a typical day, the park is lightly to moderately used in the morning, experiences its heaviest use from noon until 2:00 PM, and is moderately used from 2:00 PM until the end of the day.\(^\text{13}\) Although the proposed project would cast shadows on Sydney Walton Square, the shadows would occur at the beginning of the day when there are typically very few people in the park. The proposed project would not cast any shadows on Sydney Walton Square during the period when the park experiences its heaviest use (noon until 2:00 PM).

During the spring, summer, and autumn, Sydney Walton Square would continue to receive 10 to 12 hours of sunlight each day. During the winter when the days are coldest and shortest, Sydney Walton Square would continue to receive approximately 7 hours of sunlight each day. Considering the amount of sunlight that would reach Sydney Walton Square throughout the year,

\(^{13}\) A field observation was conducted on Tuesday, October 5, 2010. At 15-minute intervals from 8:15 AM until 5:45 PM (one hour after sunrise until one hour before sunset), the people in the park were counted and categorized by activity. From 8:15 AM until 10:00 AM, approximately 100 people were observed in the park. Approximately 75 of those people were walking through the park. During this period, approximately 15 people were sitting in the park, and approximately 10 people were engaged in active recreation (practicing tai chi or playing catch with a Frisbee). Of the approximately 25 people who were sitting down or engaged in active recreation, not a single person was in a location that received sunlight even though many areas of the park receive sunlight during this period. The park receives its heaviest use from noon until 2:00 PM. Approximately 420 people were observed in the park in this time period. Approximately 100 people were walking through the park, approximately 320 people were sitting in the park, and two people were engaged in active recreation. Of the 322 people who were sitting down or engaged in active recreation, 102 were in locations that received sunlight.
FIGURE IV.G-24: MAXIMUM EXTENT OF PROJECT SHADOW ON SYDNEY WALTON SQUARE
AT 8:03AM PDT ON SEPTEMBER 27
the early-morning shadows from the proposed project would not be harmful to the growth or health of landscaping and vegetation and would not substantially affect the use of Sydney Walton Square for passive recreation. For these reasons, the shadow impact of the proposed project on Sydney Walton Square would be considered less than significant, and no mitigation measures are required.

**Drumm Street Pedestrian Path**

Throughout the year, the proposed project would cast little to no net new shadow on the northern half of the pedestrian path (see Figures IV.G-2 through IV.G-21).

The proposed project would cast some net new shadow on the southern half of the pedestrian path in the morning. During the spring, summer, and autumn, the shadows would begin at sunrise and move off the pedestrian path at approximately 10:00 AM (see Figures IV.G-2, IV.G-3, IV.G-7, IV.G-8, IV.G-12, and IV.G-13). During the winter, the shadows would begin at sunrise and move off the pedestrian path at approximately 11:00 AM (see Figures IV.G-17 through IV.G-19).

During the spring, summer, and autumn, the pedestrian path would continue to receive 5 to 7 hours of sunlight each day. During the winter when the days are coldest and shortest, the pedestrian path would continue to receive 4 to 5 hours of sunlight each day. Considering the amount of sunlight that would reach the pedestrian path throughout the year, the shadows from the proposed project would not be harmful to the growth or health of landscaping and vegetation and would not substantially affect the use of the pedestrian path. For these reasons, the shadow impact of the proposed project on the pedestrian path would be considered less than significant, and no mitigation measures are required.

**On-Site Recreation and Open Spaces**

The following discussion describes the shadow impacts of the proposed project on the proposed on-site open spaces. It should be noted that a direct comparison of shadows on the existing on-site open spaces and shadows on the proposed on-site open spaces is not possible, because the proposed open spaces would be substantially different from the existing open spaces in terms of location and size. The area and configuration of the existing tennis courts and swimming pools would be changed, the existing open space at the eastern terminus of Pacific Avenue would be enlarged and relocated, and a new open space corridor (Jackson Common) that currently does not exist would be created as part of the project.

*Proposed Jackson Common*

As part of the proposed project, a new 9,500-square-foot publicly accessible open space corridor known as Jackson Common would be provided on the north side of the proposed residential
building. This corridor would align with and continue the Jackson Street right-of-way, providing an east-west visual and pedestrian connection to The Embarcadero and the waterfront. Jackson Common would include a plaza and landscaping, and it would be suitable for passive recreation such as sitting and strolling.

During the spring and autumn, most of Jackson Common would be shadowed from the early morning until the late afternoon. Toward the end of the day (6:21 PM on March 21 and 6:09 PM on September 21), Jackson Common would not be shadowed by existing buildings or by the proposed project (see Figures IV.G-6 and IV.G-16).

As shown on Figures IV.G-7 through IV.G-11, Jackson Common would receive the most sunlight from approximately 9:00 AM until approximately 3:00 PM during the summer. On June 21, the proposed project would shadow the northern portion of Jackson Common from sunrise until approximately 9:00 AM, and it would shadow the southern edge of Jackson Common from approximately 10:00 AM until approximately 3:00 PM. As the day progresses, shadows from existing buildings would begin to reach Jackson Common and would remain until the end of the day. By the end of the day, Jackson Common would be completely shadowed by existing buildings.

During the winter, Jackson Common would be completely shadowed by existing buildings and by the proposed project for most of the day (see Figures IV.G-17 through IV.G-21). In terms of area, the largest shadow would occur at 9:30 AM on December 20, when 9,861 square feet of the open space would be shadowed by the proposed project (see Figure IV.G-25: Maximum Extent of Project Shadow on Proposed Jackson Common at 9:30 AM PST on December 20).

During the spring and autumn, Jackson Common would receive 2 to 3 hours of sunlight each day. During the summer, Jackson Common would receive 8 to 10 hours of sunlight each day. Jackson Common would receive little sunlight during the winter, but the lack of sunlight would not substantially affect the use of Jackson Common as a pedestrian corridor. Considering the amount of sunlight that would reach Jackson Common throughout the year, the shadows from the proposed project would not be harmful to the growth or health of landscaping and vegetation, and the proposed landscaping selected would suitable for the amount of shadow created by the proposed project. Because shadow impacts on the proposed Jackson Common would be considered less than significant for the reasons stated above, no mitigation measures are required.
Proposed Pacific Avenue Park

The proposed project would create an approximately 11,500-square-foot triangular park at the north end of the project site to be called Pacific Avenue Park. The park, which would be approximately twice as large as the existing open space at this location, would include a plaza and landscaping. It would be a privately owned open space that would be accessible to the public.

During the spring and autumn, the proposed project would cast some shadow along the southern perimeter of the park from sunrise until approximately 8:00 AM. The park would be without shadows from approximately 8:00 AM until approximately 3:00 PM. After 3:00 PM, shadows from existing buildings would begin to reach the park and would remain until the end of the day. At the end of the day, the entire park would be completely shadowed by existing buildings. Figures IV.G-2 through IV.G-6 and Figures IV.G-12 through IV.G-16 show the shadow patterns from existing buildings and the proposed project on March 21 and September 21, respectively.

During the summer, the proposed project would not cast any shadow on the park. Existing buildings would shadow the southeast corner of the park from sunrise until approximately 8:00 AM. The park would be without shadows from approximately 8:00 AM until approximately 3:00 PM. After 3:00 PM, shadows from existing buildings would begin to reach the park and would remain until the end of the day. At the end of the day, the entire park would be completely shadowed by existing buildings. Figures IV.G-7 through IV.G-11 show the shadow patterns from existing buildings and the proposed project on June 21.

During the winter, the northern half of the park would be without shadows from sunrise until approximately 1:00 PM. The proposed project would cast net new shadow on the southern half of the park from sunrise until approximately 1:00 PM. In the afternoon (approximately 2:00 PM), shadows from existing buildings would begin to reach the park and would remain until the end of the day. At the end of the day, the entire park would be completely shadowed by existing buildings. Figures IV.G-17 through IV.G-21 show the shadow patterns from the existing buildings and the proposed project on December 21.

During the spring, summer, and autumn, Pacific Avenue Park would receive 7 to 8 hours of sunlight each day. During the winter when the days are coldest and shortest, Pacific Avenue Park would receive approximately 6 hours of sunlight each day. Considering the amount of sunlight that would reach Pacific Avenue Park throughout the year, the shadows from existing buildings and from the proposed project would not be harmful to the growth or health of landscaping and vegetation, and the proposed landscaping selected would be suitable for the amount of shadow created by the proposed project. The shadows from the existing buildings and from the proposed project would not substantially affect the use of Pacific Avenue Park for passive recreation such
as sitting and strolling. Because shadow impacts on the proposed Pacific Avenue Park would be considered less than significant for the reasons stated above, no mitigation measures are required.

Golden Gateway Tennis & Swim Club

As part of the proposed project, the five southernmost private tennis courts would be eliminated. On the north side of Jackson Common, four tennis courts and a 35-foot-tall health club with two outdoor swimming pools on the roof would be built as part of the proposed project for the Golden Gateway Tennis & Swim Club.

During the spring and autumn, the proposed project would shadow portions of the four relocated tennis courts from the early morning until the early afternoon. The shadows would begin at sunrise and recede as the day progresses until only the southern and eastern perimeters of the tennis courts would be shadowed at approximately 1:00 PM. The tennis courts would be without shadows for approximately 2 hours in the afternoon. At approximately 3:00 PM, shadows from existing buildings would begin to reach the tennis courts and would remain until the end of the day. At the end of the day, the tennis courts would be completely shadowed by existing buildings. The proposed rooftop swimming pools would not be shadowed by existing buildings or by the proposed project (see Figures IV.G-2 through IV.G-6 and Figures IV.G-12 through IV.G-16).

During the summer, the proposed project would shadow the four relocated tennis courts in the morning. The shadows would begin at sunrise and recede as the day progresses until only the eastern perimeter of the tennis courts would be shadowed at noon. The tennis courts would be without shadows for approximately 3 hours in the afternoon. After 3:00 PM, shadows from existing buildings would begin to reach the tennis courts and would remain until the end of the day. At the end of the day, the tennis courts would be completely shadowed. The proposed rooftop swimming pools would not be shadowed by existing buildings or by the proposed project (see Figures IV.G-7 through IV.G-11).

During the winter, existing buildings would shadow the southeast corner of the four relocated tennis courts in the early morning. The shadows would begin at sunrise and recede as the day progresses, moving off the tennis courts by 9:00 AM. The proposed project would shadow the tennis courts in the morning. The shadows would begin at sunrise and recede as the day progresses until only the southeast corner of the tennis courts is shadowed at noon. Beginning at noon, shadows from existing buildings would begin to reach the tennis courts and would remain until the end of the day. At the end of the day, the tennis courts would be completely shadowed (see Figures IV.G-17 through IV.G-21).

During the spring, summer, and autumn, the relocated tennis courts would receive 6 to 7 hours of sunlight each day, and the swimming pools would be without shadows all day. During the winter
when the days are coldest and shortest, the relocated tennis courts would receive 3 to 4 hours of sunlight each day, and the rooftop swimming pools would be without shadows all day. The relocated tennis courts would receive less sunlight during the day than the existing tennis courts. The proposed rooftop swimming pools would receive more sunlight during the day than the existing at-grade swimming pools, which are shadowed by existing buildings during the mid- to late afternoon throughout the year.

Since outdoor tennis courts and outdoor swimming pools can be illuminated, the enjoyment of these two activities is not dependent on sunlight. People can play tennis or swim outdoors at night if a facility has lighting. Weather conditions have a greater impact on outdoor tennis than a lack of sunlight. Rain can make an outdoor tennis court slippery, thus posing a danger to participants. For these reasons, the shadow impact of the proposed project on the tennis courts and swimming pools would be considered less than significant, and no mitigation measures are required.

**Impact SH-3: The proposed project would not result in a significant cumulative impact related to Shadow. (Less than Significant)**

Given the distance and position of the nearest anticipated development projects (the Exploratorium Project at Piers 15 and 17, a potential cruise ship terminal or other development at Piers 27-31, and development associated with the 34th America’s Cup) in relation to the open spaces affected by the proposed project, the size of those projects, and/or the presence of intervening structures between those projects and the open spaces, it is not likely that the project shadow would combine with shadow from these development projects to contribute to a cumulatively significant shadow impact on any of the open spaces studied. Open spaces affected by the proposed project may be within the potential reach of shadow from foreseeable future downtown skyscraper development (like that envisioned for the Transit Center District Plan). Although potential net new shadow from this development would not coincide with project shadow with respect to location and times of day and year, it could contribute to the cumulative yearly shadow loads on these open spaces. As described above, the proposed project would have less-than-significant shadow impacts on existing and proposed open spaces in the vicinity of the project site. As such, the 8 Washington/Seawall Lot 351 project would be unlikely to combine with other development to have a cumulatively considerable effect on those open spaces.

The evaluation of the specific shadow impacts of potential future development would be speculative at this time. These impacts would be studied as future projects go forward, and would take into account shadow from any then-existing buildings (including shadow from the proposed project, if it is approved and constructed).