



DRAFT ENVIRONMENTAL IMPACT REPORT / ENVIRONMENTAL IMPACT STATEMENT

Sunnydale-Velasco HOPE SF Master Plan Project

CITY AND COUNTY OF SAN FRANCISCO

PLANNING DEPARTMENT AND MAYOR'S OFFICE OF HOUSING
CASE NO. **2010.0305E**

STATE CLEARINGHOUSE NO. 2012122040



SAN FRANCISCO
PLANNING
DEPARTMENT

Screencheck Draft	Draft EIR/EIS Publication Date:	December 19, 2014
	Draft EIR/EIS Public Hearing Dates:	January 20, 2015 (Sunnydale Community Room, 1652 Sunnydale Avenue) January 22, 2015 (San Francisco Planning Commission, City Hall)
	Draft EIR/EIS Public Comment Period:	December 19, 2014 – February 17, 2015

Written comments should be sent to:

Sarah B. Jones, Environmental Review Officer
1650 Mission Street, Suite 400 | San Francisco, CA 94103

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SAN FRANCISCO PLANNING DEPARTMENT

DATE: December 19, 2014

TO: Distribution List for the Sunnydale-Velasco HOPE-SF Master Plan Project
EIR/EIS

FROM: Sarah B. Jones, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report / Environmental Impact
Statement for the Sunnydale-Velasco HOPE-SF Master Plan Project
(Case No. 2010.0305E)

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This is the Draft of the Environmental Impact Report / Environmental Impact Statement (EIR/EIS) for the Sunnydale-Velasco HOPE-SF Master Plan Project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document entitled "Response to Comments," which will contain a summary of all relevant comments on this Draft EIR/EIS and our responses to those comments, along with copies of the letters received and a transcript of the public hearing. The Response to Comments document may also specify changes to this Draft EIR/EIS. Public agencies and members of the public who testify at the hearing on the Draft EIR/EIS will automatically receive a copy of the Response to Comments 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/EIS, together with the Response to Comments document, will be considered by the Planning Commission in an advertised public meeting, and then certified as a Final EIR/EIS if deemed adequate. The documents will also be considered by the Mayor's Office of Housing and Community Development in its EIS finalization procedures.

After certification, we will modify the Draft EIR/EIS as specified by the Response to Comments document and print both documents in a single publication called the Final EIR/EIS. The Final EIR/EIS 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 Response to Comments document in addition to this copy of the Draft EIR/EIS, you will technically have a copy of the Final EIR/EIS.

We are aware that many people who receive the Draft EIR/EIS and Response to Comments document 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/EIS, in Adobe Acrobat format on a compact disk (CD), to private individuals only if they request them. Therefore, if you would like a copy of the Final EIR/EIS, please fill out and mail the postcard provided inside the back cover to the Environmental Planning division of the Planning Department within two weeks after certification of the EIR/EIS. Any private party not requesting a Final EIR/EIS by that time will not be mailed a copy.

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EXECUTIVE SUMMARY

S.1 Project Description

This combined environmental impact report and environmental impact statement (EIR/EIS) addresses the Sunnydale-Velasco HOPE SF Master Plan project, which is located in the Visitacion Valley neighborhood of San Francisco.

The San Francisco Planning Department, pursuant to the San Francisco Administrative Code, Chapter 31, has determined that an EIR is required for the project based on the requirements of the California Environmental Quality Act (CEQA). The City of San Francisco's Mayor's Office of Housing and Community Development (MOHCD), as lead agency under the National Environmental Policy Act (NEPA), has determined that the project requires the preparation of an Environmental Impact Statement (EIS).

This EIR/EIS is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of the project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project.

Project Characteristics

The project sponsor is the Sunnydale Development Co., LLC. Sunnydale Development Co., LLC comprises co-developers Mercy Housing California and The Related Companies of California. Under the proposed project, the project sponsor would demolish the existing buildings, including all 785 family and senior dwelling units, at the Sunnydale and Velasco public housing complexes, and build replacement and new housing, new infrastructure, open space and community amenities. Highlights of the plan include:

- Up to 1,700 units of housing, including one-for-one public housing replacement units, affordable rental units and market rate and affordable for-sale units;
- Up to 72,500 square feet of community service, recreational and educational facilities;
- 11.5 acres of new parks and open spaces, including a community garden, a farmer's market pavilion and secure outdoor courtyards within residential buildings;
- 12.2 acres of a new and reconfigured street network potentially including "green" features including bioswales and landscaping; and

- Up to 16,200 square feet of neighborhood-serving retail.
- The project sponsor intends to construct the project to LEED® (Leadership in Energy Efficient Design) ND (Neighborhood Development) standards.

The project sponsor proposes to demolish and replace the existing 94 two-story residential buildings within the Sunnydale and Velasco public housing development with approximately 34 new two- to five-story development blocks.

The completed project would occupy approximately 2,843,500 square feet of floor area for a net increase of 2,049,000 square feet. The height of the new buildings would range from 40 to 60 feet above ground level, with 18 buildings at 40 feet or less in height and 15 buildings at 50 feet in height, and one building at 60 feet in height. Thirty-three of the buildings would contain family dwelling units; the single building at 60 feet in height would contain senior housing and would have some retail and community services on the ground floor. The buildings would be a mix of the following:

- Townhouse/Rowhouse—Attached, multistory, single-family homes (15 to 30 units per acre);
- Stacked Flats—One-story apartments arranged one over the other (25 to 40 units per acre);
- Podium Building—A building with a parking garage below and residences or other uses above (40 to 50 units per acre);
- Corridor Building—An apartment building with units accessed from a central corridor (40 to 60 units per acre);
- Mixed Use—Retail or public use on ground floor with senior housing above (50 to 80 units per acre); and
- Up to 72,500 square feet of community-serving space in several locations, including a separate two-story community center, which would house recreational facilities for use by project residents and residents of the neighborhood, with youth and early childhood education programs.

The project would be built in three major phases over a period of 9 to 15 years. During each phase, the existing buildings, streets, and utilities would be demolished first, and rough grading of the streets, building pads and open space would occur. The project would require about 221,000 cubic yards of soil to be hauled off the site. Maximum excavation, however would be 45 feet (13.5 meters) below the current ground surface.

The project sponsor proposes realigning Sunnydale, Brookdale and Blythedale Avenues and Santos Street and adding new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street. Brookdale Avenue would be realigned to connect with Sunnydale Avenue; new cross streets would connect Blythedale Avenue to Sunnydale Avenue at three different locations; Blythedale Avenue would be realigned at Hahn

Street to connect with Sunrise Way; and a pair of new streets would link Blythedale Avenue and Hahn Street one block north of Sunrise Way.

The project site currently contains 430 off-street surface parking spaces (0.55 spaces per dwelling unit) and 452 on-street parking spaces. The proposed project would provide approximately 1,437 off-street parking spaces (0.85 spaces per dwelling unit) in underground and at-grade parking garages in mixed-use and residential buildings, and 525 on-street parking spaces.

Purpose and Need and Project Objectives

As further detailed in Chapter 1, San Francisco consistently ranks as one of the most expensive housing markets in the United States. There is a particular need for units affordable to very low-, low-, and moderate-income households. Moreover, the existing housing stock at the Sunnydale-Velasco complexes is substantially deteriorated and does not comply with current building standards. The complex is removed from the city and the rest of Visitacion Valley by topography, the unusual street pattern, and by its barracks-like building design and layout.

To address some of these needs, HOPE SF has the following guiding principles:

1. Ensure no loss of public housing,
2. Create an economically integrated community,
3. Maximize the creation of new affordable housing,
4. Involve residents in the highest levels of participation in entire project,
5. Provide economic opportunities through the rebuilding process,
6. Integrate process with neighborhood improvement revitalization plans,
7. Create environmentally sustainable and accessible communities, and
8. Build a strong sense of community.¹

The project sponsor has identified the following project purpose and objectives:

- Create a racially, socially, and economically integrated neighborhood with new high-quality public housing units, affordable rental apartments, and market-rate for-sale homes;
- Ensure no loss of public housing units;
- Develop a financially feasible project;
- Establish physical and social connections between the Sunnydale-Velasco housing developments, the larger Visitacion Valley neighborhood, and the larger city;
- Provide economic opportunities for residents;
- Provide community facilities, including space for on-site services and programs;

¹ HOPE SF: Guiding Principles, web page: <http://hope-sf.org/guiding-principles.php>, accessed September 5, 2014.

- Create a comprehensive services plan to address gaps in services and facilitate access to existing programs and resources;
- Build new safe streets and open spaces;
- Create an environmentally sustainable and accessible community with access to healthy food and gardens;
- Develop different building types at a density to make the project economically viable;
- Build community-serving retail stores; and
- Incorporate green and healthy development principles that include green construction and healthy buildings, a walkable neighborhood, stormwater management, and solar technology.

Project Variant

The project sponsor is considering a variant to the proposed project that would have a different number of units set aside for market rate housing than the number of such units proposed under the project. This variant also proposes a different mix of one-, two-, and three-bedroom market-rate dwelling units, with 62 fewer units than the proposed project, but would maintain the same building envelope (i.e., same number of buildings in the same size and configuration).

S.2 Alternatives

Alternative A: Reduced Development / Density Alternative

Under the Reduced Development / Density Alternative (Alternative A), the existing 94 two-story residential buildings at the project site would be demolished. Up to 1,372 units of housing would be constructed in 37 new buildings. There would be 852 affordable units, 67 of which would be affordable rental units. This total would include public housing replacement units subsidized by the San Francisco Housing Authority (SFHA) but under management by and the ownership of the developers or related entities. The alternative would also provide 520 market-rate units.

The alternative would occupy approximately 2,010,000 square feet of floor area for a net increase of 1,215,500 square feet. The height of the new buildings would range from 40 to 60 feet above ground level. Similar to the proposed project, the single building at 60 feet in height would contain senior housing and would have some retail and community services on the ground floor. The buildings would be a mix of Townhouse/Rowhouse, Stacked Flats, Podium Buildings, Corridor Buildings, and Mixed Use.

Similar to the proposed project, the Reduced Development / Density Alternative would include up to 72,500 square feet of community service, recreational and educational facilities. The community center, community building, and pavilion would be located in the same locations under the alternative as under the proposed project. It would also include 16,200 square feet of neighborhood-serving retail, and it would be constructed to meet LEED® (Leadership in Energy Efficient Design) ND (Neighborhood Development) standards.

The alternative would include 5.6 acres of new public parks and open spaces. As under the proposed project, under the alternative these open spaces and parks would include a community garden, a farmer's market pavilion and secure outdoor courtyards within residential buildings.

The site plan would be similar to that of the proposed project. Sunnydale, Brookdale and Blythedale Avenues and Santos Street would be realigned in the same locations as those of the proposed project. New cross streets would be constructed between Brookdale Avenue and Sunnydale Avenue; and a pair of new streets would link Blythedale Avenue and Hahn Street one block north of Sunrise Way. The alternative would provide approximately 1,123 off-street parking spaces (0.82 spaces per dwelling unit) in underground and at-grade parking garages in mixed-use and residential buildings, and 481 on-street parking spaces. It would also provide 654 bike parking spaces.

Alternative B: One-for-One Replacement Alternative

Under this alternative (Alternative B), the existing 94 two-story residential buildings at the Sunnydale and Velasco public housing complexes would be replaced. The new buildings would be designed to accommodate the 785 family and senior dwelling units that are present under existing conditions. These 785 units would remain affordable housing, subsidized by SFHA but under management by and the ownership of the developers or related entities. The building designs would be similar to those under existing conditions, but they would be revised to meet current San Francisco *Planning Code* and *Building Code* requirements. No rezoning of the site would be required.

The site plan for the complexes and the existing street grid would remain generally the same as they are under existing conditions, although some grading and pad adjustments would be undertaken. The Alternative would add one new cross street at the northern portion of the project area connecting Sunnydale Avenue to Brookdale Avenue. This would allow for the closure of portions of Sunnydale without having to shut down the bus service through this project, at any time. Existing streets would retain their current connections to the surrounding Visitacion Valley street network.

The project site's existing 430 off-street surface parking spaces and 452 on-street parking spaces would be replaced in approximately their current configurations. The alternative would provide bicycle parking spaces for residential use. Bike parking would also be provided for the community center use. The existing public open space at the project site—including existing recreational facilities—would be replaced in the same locations. The community center and child care uses would be located in the same locations as under existing conditions.

Alternative C: No Action / No Project Alternative

Under the No Action Alternative, the existing Sunnydale and Velasco Housing complexes would not be improved. The existing 94 buildings and 785 units would remain in their current conditions. All roadways within and through the project site would retain their current configuration, and no new community buildings, parks, open spaces, or other buildings or

infrastructure would be built or renovated. The site would continue to be operated by SFHA, and existing tenants would not be temporarily relocated within the site because there would be no new construction. Regular maintenance of existing buildings and facilities would continue to occur under this alternative.

S.3 Environmental Impacts and Mitigation Measures

This EIR/EIS describes the environmental setting, summarizes applicable environmental policies and regulations, assesses impacts, and identifies mitigation measures for potentially significant and significant impacts. It addresses the full range of environmental topics required under both NEPA and CEQA for the proposed project, variant, and alternatives.

Summary of Impacts and Mitigation Measures

Table S-1 summarizes the impacts of the Sunnydale-Velasco HOPE SF Master Plan project under NEPA, identifies the significance determination of each impact assuming implementation of mitigation measures, and presents the full text of the identified mitigation measures.

Table S-2 summarizes the impacts of project under CEQA, identifies the significance determination of each impact assuming implementation of mitigation measures, and presents the full text of the identified mitigation measures.

The variant to the proposed project would result in the same impacts under both CEQA and NEPA, and the same mitigation measures have been identified to reduce those impacts to a less-than-significant level.

Under NEPA, alternatives are analyzed at an equal level of detail. Therefore, **Table S-3** summarizes all of the impacts of each alternative under NEPA.

Under CEQA, alternatives are explored for the purpose of avoiding or reducing significant impacts. Therefore, **Table S-4** summarizes only the *significant* impacts of the proposed project and each alternative under CEQA.

Environmentally Superior Alternative

Alternative B: One-for-One Replacement Alternative would reduce the project's cumulative impacts to transportation and circulation under both CEQA and NEPA. The alternative would not result in substantially increased or significant environmental effects related to other criteria presented in this EIR/EIS, and would generally reduce less-than-significant impacts as compared to the proposed project.

TABLE S-1
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
1. SIGNIFICANT AND UNAVOIDABLE IMPACTS			
Transportation and Circulation			
<p>CC-TR-1: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.</p>	<p>Significant</p>	<p>Mitigation Measure M-CC-TR-1(a): Upon completion of the proposed project, the San Francisco Municipal Transportation Agency (SFMTA) shall regularly monitor vehicular congestion. If LOS at Sunnydale Avenue and Schwerin Street degrades substantially to LOS E, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a left-turn pocket at the intersection of Sunnydale Avenue and Schwerin Street on the westbound approach. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Mitigation Measure M-CC-TR-1(b): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the southbound left-turn volume at Geneva Avenue and Santos Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a left-turn pocket at the intersection of Geneva Avenue and Santos Street on the southbound approach. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Mitigation Measure M-CC-TR-1(c): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the westbound through movement volume at Geneva Avenue and Schwerin Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a right-turn pocket at the intersection of Geneva Avenue and Schwerin Street on the westbound and southbound approaches. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Improvement Measure I-CC-TR: The project sponsor could work with SFMTA to prohibit left turns at the intersection of Geneva Avenue and Brookdale Avenue by installing raised pavement markers.</p>	<p>Significant and Unavoidable</p>

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS			
Cultural and Paleontological Resources			
<p>CP-2: The proposed project could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the National Register of Historic Places (NRHP) maintained by the U.S. Secretary of the Interior.</p>	<p>Significant</p>	<p>Mitigation Measure M-CP-2: Archeological Testing Program.</p> <p>An Archeological Testing Program shall be developed to ascertain whether archeological material may be preserved underneath recent fill within the project CEQA Area of Potential Effect (C-APE). This effort shall entail geoarcheological coring of the eastern-most portion of the project C-APE—in project blocks 1 through 8 east of Santos Street—and shall take place after detailed project design plans have been developed that show the full extent and depth of project construction activity. Additional pre-field investigations into the cut and fill history of the project C-APE should also be undertaken. With these additional data sets, the precise placement and depth of cores can be determined in order to ensure testing coverage is sufficient to identify any unknown archeological material that would be impacted by construction activities.</p> <p>Based on a reasonable presumption that archeological resources may be present within the project area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried archeological resources. The project sponsor shall retain the services of an archaeological consultant qualified in geoarcheology from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). 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.</p> <p>Archeological 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</p>	<p>Less than Significant</p>

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Section 15064.5 (a)(c).</p> <p>Consultation with Descendant Communities. On discovery of an archeological site² an appropriate representative³ of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.</p> <p>Archeological Testing Plan. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological 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 archeological testing program shall be to determine to the extent possible the presence or absence of archeological resources and to identify and evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.</p> <p>At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted.</p>	

² The term “archeological site” is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

³ An “appropriate representative” of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission.

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:</p> <p>A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or</p> <p>B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</p> <p>Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:</p> <ul style="list-style-type: none"> • The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological monitoring program (AMP) reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically 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 archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context; • The archeological 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 archeological resource; • The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; 	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<ul style="list-style-type: none"> The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological 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 archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO. <p>Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.</p> <p>Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological 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 archeological resource is expected to contain. That is, the ADRP shall 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 archeological resources if nondestructive methods are practical.</p>	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>The scope of the ADRP shall include the following elements:</p> <ul style="list-style-type: none"> • <i>Field Methods and Procedures.</i> Descriptions of proposed field strategies, procedures, and operations. • <i>Cataloguing and Laboratory Analysis.</i> Description of selected cataloguing system and artifact analysis procedures. • <i>Discard and Deaccession Policy.</i> Description of and rationale for field and post-field discard and deaccession policies. • <i>Interpretive Program.</i> Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. • <i>Security Measures.</i> Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. • <i>Final Report.</i> Description of proposed report format and distribution of results. • <i>Curation.</i> 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. <p>Final Archeological Resources Report. The archeological consultant shall submit a Draft 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 testing/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.</p> <p>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, 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 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.</p>	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
<p>CP-4: The proposed project could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior.</p>	Significant	<p>Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.</p> <p>The following measures shall be implemented in the event of the discovery, or anticipated discovery, of human remains and associated burial-related cultural materials:</p> <p>The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities shall comply with applicable state laws. This shall include immediate notification of the coroner of the county within which the project is located and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archeological consultant, the project sponsor, ERO and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project sponsor shall follow Section 5097.98(b) of the PRC, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."</p>	Less than Significant
<p>CP-5: The proposed project could be inconsistent with established management plans and agreements for cultural resources, including the 2007 Programmatic Agreement (PA).</p>	Significant	<p>Mitigation Measure M-CP-2: Archeological Testing Program.</p> <p>Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.</p> <p>(see above for complete text of measures)</p>	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Transportation and Circulation			
<p>TR-6: Construction under the proposed project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.</p>	<p>Significant</p>	<p>Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.</p> <p>The project sponsor shall implement the following measure:</p> <p>To reduce potential delays and conflicts between construction activities and various modes of transportation, the project sponsor and its construction contractor(s) shall prepare a traffic control plan(s) for project construction. The project sponsor and construction contractor(s) shall meet with residents, neighbors, Department of Public Works (DPW), SFMTA, the Fire Department, San Francisco Unified School District (SFUSD), Muni Operations, and other City agencies to coordinate feasible measures to reduce transportation conflicts and delays, including temporary transit stop relocations, transit service re-routing, adequate emergency access route(s), and other measures to reduce traffic and transit disruption, pedestrian and bicycle circulation effects, and interference with emergency access during construction of the proposed project. The contractor would be required to comply with the City and County of San Francisco's Regulations for Working in San Francisco Streets, which establish rules and permit requirements so that construction activities can be done safely while minimizing interference with pedestrians, bicyclists, transit, and vehicular traffic.</p> <p>The coordinated plan shall include measures that address street closures, and ensure safe access to the McLaren Early Education School and all occupied residences. It shall also include, but may not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Advisory signs shall be erected several weeks in advance to inform the public of planned street closures in the area. During each construction phase, street closure signs and detour routes shall be posted to direct vehicles to use alternative routes to access the project site. • Emergency vehicle access shall be maintained to the school and all other occupied units and buildings at all times using the temporary streets, detour routes, and/or flagpersons. • Construction staging and worker parking shall occur within the 48-acre Sunnydale-Velasco project site. 	<p>Less than Significant</p>

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Transportation and Circulation (cont.)			
TR-6 (cont.)		<ul style="list-style-type: none"> The construction contractor shall coordinate with school administrators to ensure safe access to and from the school for students, teachers, and parents at all times. The contractors should inquire as to the school start and dismissal times and schedule construction vehicle trips outside of the peak school drop-off and pick up hours to the extent feasible. If avoiding these hours is infeasible, the construction contractor shall provide additional flaggers during school drop-off and pick-up hours near school. To the extent applicable, the traffic control plan shall conform to Caltrans's Manual of Traffic Controls for Construction and Maintenance Work Zones. 	
Noise			
<p>NO-1: The proposed project would generate construction noise that would not comply with local standards and would result in exposure of residents of public housing to background noise levels that exceed the United States Department of Housing and Urban Development's (HUD's) acceptable noise level of 65 decibels Day-Night Sound Level (dB DNL) without attenuation.</p>	Significant	<p>Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.</p> <p>The project sponsor shall incorporate the following practices into the construction specifications documents to be implemented by the project contractor:</p> <ul style="list-style-type: none"> Provide enclosures and mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy operations, such as grading or use of concrete saws within 50 feet of an occupied sensitive land use. Use construction equipment with lower (less than 70 dB) noise emission ratings whenever possible, particularly air compressors and generators. Do not use equipment on which sound-control devices provided by the manufacturer have been altered to reduce noise control. Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from these sensitive receptors. Prohibit unnecessary idling of internal combustion engines. Require applicable construction-related vehicles and equipment to use designated truck routes to access the project site. Construction traffic should be routed along Geneva Avenue, Brookdale Avenue and Santos Street and should be managed to avoid peak periods. 	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Noise (cont.)			
NO-1 (cont.)		<ul style="list-style-type: none"> Implement noise attenuation measures to the extent feasible (i.e., such that they do not impede efficient operation of equipment or dramatically slow production rates), which may include, but are not limited to, noise barriers or noise blankets. The placement of such attenuation measures shall be reviewed and approved by the Director of Public Works prior to issuance of development permit for construction Designate a Noise Disturbance Coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the Noise Disturbance Coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas. <p>Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses.</p> <p>For new residential development located along Sunnydale Avenue and Santos Street, the Planning Department and Department of Building Inspection shall require the sponsor to use building materials sufficient to maintain an interior noise level of 45 dBA (A-weighted decibels) DNL. The determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable interior noise level can be met. There are a number of measures that could be implemented to achieve this standard. Some examples include:</p> <ul style="list-style-type: none"> Installation of forced-air ventilation and sound rated construction materials. Installation of noise insulation features such as stucco-sided walls with resilient furring elements and sound-rated windows and doors. <p>Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.</p> <p>To minimize effects on residential development at the project site, the Planning Department, through its building permit review process and in conjunction with the noise analysis set forth in Mitigation Measure M-NO-1b, shall require that open space required under the <i>Planning Code</i> for residential uses be protected, to the maximum feasible extent, from existing ambient noise levels sufficient to maintain an exterior noise level of 70 dBA DNL for outdoor open spaces. The</p>	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Noise (cont.)			
NO-1 (cont.)		determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable interior noise level can be met. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.	
Biological Resources			
BI-1: The proposed project would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species.	Significant	<p>Mitigation Measure M-BI-1a: Protection of Special Status Bat Species: The project sponsor shall implement the following measures:</p> <ul style="list-style-type: none"> Prior to construction or demolition activities within 250 feet of trees/structures with at least a moderate potential to support special-status bats, a qualified biologist (i.e., a biologist holding a California Department of Fish and Wildlife [CDFW] collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle and collect bats) shall survey for bats. If no evidence of bats (i.e., visual or acoustic detection, guano, staining, strong odors) is present, no further mitigation is required. If special-status bats raising pups (also called a maternity colony) are identified within 250 feet of the project area during preconstruction surveys or project construction (typically, maternity colonies are active April 15th through August 15th), the project sponsor shall create a no-disturbance buffer acceptable in size to CDFW around the bat roosts. Bat roosts initiated within 250 feet of the project area after construction has already begun are presumed to be unaffected by project-related disturbance, and no buffer would be necessary. However, the "take" of individuals (e.g., direct mortality of individuals, or destruction of roosts while bats are present) is prohibited. Trees or buildings with evidence of special-status bat activity shall be removed during the time that is least likely to affect bats as determined by a qualified bat biologist (in general, roosts should not be removed if maternity bat roosts are 	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Biological Resources (cont.)			
BI-1 (cont.)		<p>present, typically April 15th through August 15th, and roosts should not be removed if present bats are in torpor, typically when temperatures are less than 40 degrees Fahrenheit). Non-maternity bat roosts shall be removed by a qualified biologist, by either making the roost unsuitable for bats by opening the roost area to allow airflow through the cavity, or excluding the bats using one-way doors, funnels, or flaps.</p> <ul style="list-style-type: none"> All special-status bat roosts that are destroyed shall be replaced at a 1:1 ratio with a roost suitable for the displaced species. The type of created roosting habitat would be reflective of the habitat preference of the displaced species and would be determined by the bat biologist. An example would be bat boxes for colonial roosters. The roost shall be modified as necessary to provide a suitable roosting environment for the target bat species. <p>Mitigation Measure M-BI-1b: Protection of Nesting Birds: The project sponsor shall implement the following:</p> <ul style="list-style-type: none"> Preconstruction bird surveys shall be conducted by a qualified biologist during the breeding season (breeding season is defined as February 1st through August 15th) if tree removal or building demolition is scheduled to take place during the breeding season. For raptors, a preconstruction survey for nests and nesting birds shall be conducted within 2 weeks prior to initiation of construction activities if work shall occur during the breeding season. A qualified biologist shall survey all potential nesting sites in the construction limits and within 300 feet and in line of sight of the construction limits. If active nests are located, work shall not occur within 300 feet of the nest until an appropriate buffer zone has been established in coordination with the appropriate agencies (i.e., United States Fish and Wildlife Service [USFWS] and/or CDFW). For other nesting birds protected by the Migratory Bird Treaty Act, a pre-construction survey for active nests shall be conducted by a qualified biologist no more than 2 weeks before construction if work would occur during the breeding season. The survey shall be conducted within 100 feet of the work areas. If construction would affect the nest, then work shall not occur within 	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Biological Resources (cont.)			
BI-1 (cont.)		<p>100 feet of the nest until a qualified biologist, in coordination with the appropriate agencies, has established an appropriate buffer zone.</p> <ul style="list-style-type: none"> • Special-status birds that establish nests during the construction period are considered habituated to such activity and no buffer shall be required, except as needed to avoid direct destruction of the nest, which would still be prohibited. • Outside of the breeding season (August 16th through January 31st), or after young birds have fledged, as determined by the biologist, work activities may proceed. 	
Hazards and Hazardous Materials			
HZ-1: The proposed project could result in a human health or environmental hazard through the use or disposal of hazardous substances.	Significant	<p>Mitigation Measure M-HZ-1: Hazardous Building Materials.</p> <p>The project sponsor shall ensure that PCB-containing (Polychlorinated Biphenyl-containing) equipment, such as fluorescent light ballasts, and other potentially hazardous building materials are removed and properly disposed of prior to the start of demolition. Old light ballasts that would be removed during demolition would be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast could not be verified, then they would be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous materials identified either before or during demolition would be abated according to federal, state, and local laws and regulation.</p> <p>Mitigation Measure M-HZ-2: Site Mitigation Plan (see below)</p>	Less than Significant
HZ-2: The proposed project could result in the release of hazardous substances that creates a human health or environmental hazard.	Significant	<p>Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey</p> <p>The project sponsor shall retain a qualified environmental consulting firm to prepare a Site Mitigation Plan (SMP) to address the possible discovery of unexpected contaminants during construction. The SMP shall specify procedures to follow upon discovery of suspect soils and include appropriate notification, handling, and disposal protocols. The SMP shall also include contingency response actions, worker health and safety protocols, stormwater protection measures, dust mitigation in accordance with San Francisco Health Code Article 22B, and noise control in accordance with San Francisco Noise Ordinance.</p>	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Hazards and Hazardous Materials (cont.)			
HZ-2 (cont.)		<p>The project sponsor shall also prepare a work plan describing procedures for the completion of a radon soil vapor survey to be conducted prior to construction.</p> <p>The SMP and radon soil survey work plan shall be submitted to the San Francisco Department of Public Health for review and approval prior to commencement of construction activities.</p>	
3. LESS-THAN-SIGNIFICANT IMPACTS			
Land Use			
LU-2: The proposed project would not be inconsistent with applicable land use plans and policies.	Less than Significant	None required.	Less than Significant
LU-3: The proposed project would not be incompatible with surrounding development.	Less than Significant	None required.	Less than Significant
CC-LU: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.	Less than Significant	None required.	Less than Significant
Visual Quality / Aesthetics			
AE-1: The proposed project would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources.	Less than Significant	None required.	No Impact
AE-2: The proposed project would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area.	Less than Significant	None required.	Less than Significant
CC-AE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative visual quality / aesthetics impacts.	No Impact	None required.	No Impact

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Socioeconomics / Population and Housing			
PH-1: The proposed project would not induce a substantial amount of unplanned growth.	No Impact	None required.	No Impact
PH-2: The proposed project would result in displacement of existing residents.	Less than Significant	None required	Less than Significant
PH-3: The proposed project would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group.	Significant and Beneficial	None required.	Significant and Beneficial
PH-4: The proposed project would not cause a decrease in local or regional employment	No Impact	None required.	No Impact
CC-PH: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative socioeconomics impacts.	Less than Significant	None required.	Less than Significant
Environmental Justice			
EJ-1: The proposed project would not result in a substantial impact that disproportionately affects low-income and minority populations.	No Impact	None required	No Impact
CC-EJ: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in substantial environmental transportation impacts that disproportionately affect low-income and minority populations.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Cultural and Paleontological Resources			
CP-1: The proposed project would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior.	No Impact	None required.	No Impact
CC-CP: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative cultural resource impacts.	No Impact	None required.	Less than Significant
Transportation and Circulation			
TR-1: The proposed project would not cause levels of service at local intersections to substantially deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	Improvement Measure I-TR-A: The SFMTA could add a left-turn pocket on the northbound approach on Sunnydale Avenue at Persia Street and a right-turn pocket on the eastbound approach on Persia Avenue at Sunnydale Avenue. Improvement Measure I-TR-B: The SFMTA could add a right-turn pocket on the southbound approach on Brookdale Avenue at Geneva Avenue. Improvement Measure I-TR-C: The SFMTA could add a right-turn pocket on the southbound approach on Santos Street at Geneva Avenue.	Less than Significant
TR-2: The proposed project would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	None required.	Less than Significant
TR-3: The proposed project would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Transportation and Circulation (cont.)			
TR-4: The proposed project would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	Improvement Measure I-TR-D: The project sponsor could work with Recology, the City's designated trash, recycling, and compost hauler, and with the San Francisco Department of the Environment and the SFMTA's Sustainable Streets Division as master planning proceeds to the schematic design stage for the proposed buildings, to ensure that trash, recycling, and composting facilities are designed to ensure maximum diversion of trash from the City's landfill and that the collection bins are stored in such locations to maximize efficiency in container pickup and minimize traffic disruption during collection.	Less than Significant
TR-5: The proposed project would not result in inadequate emergency access.	Less than Significant	None required.	Less than Significant
CC-TR-2: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers.	Less than Significant	None required.	Less than Significant
Noise			
NO-2: The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Less than Significant	None required.	Less than Significant
NO-3: The proposed project would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors.	Less than Significant	None required.	Less than Significant
CC-NO: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse noise impacts.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Air Quality			
AQ-6: The proposed project would not generate federal non-attainment criteria pollutants or their precursors in quantities that would trigger the need for a general conformity assessment.	Less than Significant	None required.	Less than Significant
Greenhouse Gas Emissions			
GG-1: The proposed project would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO ₂ e) per year.	Less than Significant	None required.	Less than Significant
Recreation			
RE-1: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.	Less than Significant	None required.	Less than Significant
CC-RE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse recreation impacts.	Less than Significant	None required.	Less than Significant
Utilities and Service Systems			
UT-1: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment.	Less than Significant	None required.	Less than Significant
UT-3: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Utilities and Service Systems (cont.)			
UT-4: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply.	Less than Significant	None required.	Less than Significant
UT-5: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal.	Less than Significant	None required.	Less than Significant
CC-UT: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts.	Less than Significant	None required.	Less than Significant
Public Services			
PS-1: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries.	Less than Significant	None required.	Less than Significant
CC-PS: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impacts.	Less than Significant	None required.	Less than Significant
Biological Resources			
BI-2: The proposed project would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level).	No Impact	None required.	No Impact
BI-3: The proposed project would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act.	No Impact	None required.	No Impact

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Biological Resources (cont.)			
BI-4: The proposed project would not interfere substantially with an existing wildlife corridor.	Less than Significant	None required.	Less than Significant
BI-5: The proposed project would not have a substantial adverse effect on locally-protected trees.	Less than Significant	None required.	Less than Significant
BI-6: The proposed project would not conflict with an adopted habitat conservation plan.	No Impact	None required.	No Impact
CC-BI: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts.	Less than Significant	None required.	Less than Significant
Geology and Soils			
GE-1: The proposed project would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils.	Less than Significant	None required.	Less than Significant
GE-2: The proposed project would not expose people or structures to substantial threat of injury or damage from slope failure.	Less than Significant	None required.	Less than Significant
GE-3: The proposed project would not cause substantial soil erosion.	Less than Significant	None required.	Less than Significant
GE-4: The proposed project would not destabilize existing geologic conditions or accelerate adverse geologic processes.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Geology and Soils (cont.)			
CC-GE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse geologic impacts.	Less than Significant	None required.	Less than Significant
Hydrology and Water Quality			
HY-1: The proposed project would not result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards).	Less than Significant	None required.	Less than Significant
HY-2: The proposed project would not result in depletion of groundwater volume or degradation of groundwater quality.	Less than Significant	None required.	Less than Significant
HY-3: The proposed project would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts.	Less than Significant	None required.	Less than Significant
HY-5: The proposed project would not locate occupied structures where there are potential risks associated with flooding.	No Impact	None required.	No Impact
CC-HY: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse impacts to hydrology or water quality.	Less than Significant	None required.	Less than Significant
Hazards and Hazardous Materials			
HZ-4: The proposed project would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above United States Environmental Protection Agency (U.S. EPA) acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes.	Less than Significant	None required.	Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER NEPA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Hazards and Hazardous Materials (cont.)			
HZ-6: The proposed project would be located at an acceptable separation distance from a fire or explosive hazard.	Less than Significant	None required.	Less than Significant
CC-HZ: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse hazards impacts.	Less than Significant	None required.	Less than Significant
Mineral and Energy Resources			
ME-3: The project would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider.	Less than Significant	None required.	Less than Significant
CC-ME: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative energy impacts.	Less than Significant	None required.	Less than Significant
Agricultural and Forest Resources			
AG-1: Construction and operation of the proposed project would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.	No Impact	None required.	No Impact
CC-AG: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts.	No Impact	None required.	No Impact

TABLE S-2
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
1. SIGNIFICANT AND UNAVOIDABLE IMPACTS			
Transportation and Circulation			
<p>CC-TR-1: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.</p>	Significant	<p>Mitigation Measure M-CC-TR-1(a): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If LOS at Sunnydale Avenue and Schwerin Street degrades substantially to LOS E, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a left-turn pocket at the intersection of Sunnydale Avenue and Schwerin Street on the westbound approach. The project sponsor, or is successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Mitigation Measure M-CC-TR-1(b): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the southbound left-turn volume at Geneva Avenue and Santos Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a left-turn pocket at the intersection of Geneva Avenue and Santos Street on the southbound approach. The project sponsor, or is successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Mitigation Measure M-CC-TR-1(c): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the westbound through movement volume at Geneva Avenue and Schwerin Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with the SFMTA to add a right-turn pocket at the intersection of Geneva Avenue and Schwerin Street on the westbound and southbound approaches. The project sponsor, or is successor(s), shall make a fair share contribution of funding for the improvement.</p> <p>Improvement Measure I-CC-TR: The project sponsor could work with SFMTA to prohibit left turns at the intersection of Geneva Avenue and Brookdale Avenue by installing raised pavement markers.</p>	Significant and Unavoidable

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS			
Cultural and Paleontological Resources			
CP-2: The proposed project could cause a substantial adverse change in the significance of an archeological resource.	Significant	<p>Mitigation Measure M-CP-2: Archeological Testing Program.</p> <p>An Archeological Testing Program shall be developed to ascertain whether archeological material may be preserved underneath recent fill within the project C-APE. This effort shall entail geoarcheological coring of the eastern-most portion of the project C-APE—in project blocks 1 through 8 east of Santos Street—and should shall take place after detailed project design plans have been developed that show the full extent and depth of all project construction activity impacts. Additional pre-field investigations into the cut and fill history of the project C-APE should also be undertaken. With these additional data sets, the precise placement and depth of cores can be determined in order to ensure testing coverage is sufficient to identify any unknown archeological material that would be impacted by construction activities.</p> <p>Based on a reasonable presumption that archeological resources may be present within the project area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried archeological resources. The project sponsor shall retain the services of an archaeological consultant qualified in geoarcheology from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the ERO. 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.</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>Archeological 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 archeological resource as defined in CEQA Guidelines Section 15064.5 (a)(c).</p> <p>Consultation with Descendant Communities. On discovery of an archeological site an appropriate representative of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.</p> <p>Archeological Testing Plan. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological 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 archeological testing program shall be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.</p> <p>At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional</p>	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:</p> <p>A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or</p> <p>B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.</p> <p>Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:</p> <ul style="list-style-type: none"> • The archeological 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 archeological consultant shall determine what project activities shall be archeologically 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 archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context; • The archeological 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 archeological resource; • The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; 	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<ul style="list-style-type: none"> The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological 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 archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO. <p>Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.</p> <p>Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological 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 archeological resource is expected to contain. That is, the ADRP shall 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 archeological resources if nondestructive methods are practical.</p>	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		<p>The scope of the ADRP shall include the following elements:</p> <ul style="list-style-type: none"> • <i>Field Methods and Procedures.</i> Descriptions of proposed field strategies, procedures, and operations. • <i>Cataloguing and Laboratory Analysis.</i> Description of selected cataloguing system and artifact analysis procedures. • <i>Discard and Deaccession Policy.</i> Description of and rationale for field and post-field discard and deaccession policies. • <i>Interpretive Program.</i> Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. • <i>Security Measures.</i> Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. • <i>Final Report.</i> Description of proposed report format and distribution of results. • <i>Curation.</i> 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. <p>Final Archeological Resources Report. The archeological consultant shall submit a Draft 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 testing/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.</p> <p>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, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR</p>	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		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.	
CP-3: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	Significant	<p>Mitigation Measure M-CP-3a: Paleontological Resources Mitigation Program. Prior to ground disturbance, the project sponsor shall retain a qualified paleontologist (is a practicing scientist who is recognized in the paleontologic community and is proficient in vertebrate paleontology) or a California Professional Geologist with appropriate paleontological expertise to carry out all mitigation measures related to paleontological resources. The qualified paleontologist or geologist shall be available “on-call” to project sponsor throughout the duration of ground-disturbing activities.</p> <p>Mitigation Measure M-CP-3b: Paleontological resources training. All construction forepersons and field supervisors conducting or overseeing subsurface excavations shall be trained by a qualified paleontologist in the recognition of potential fossil materials prior to ground disturbing activities. A one hour pre-construction training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in person training by the qualified paleontologist. In addition to fossil recognition, the training shall convey procedures to follow in the event of a potential fossil discovery.</p> <p>Mitigation Measure M-CP-3c: Assessment and salvage of potential fossil finds. If potential fossils are discovered during construction, all earthwork or other types of ground disturbance in the immediate vicinity of the find shall stop until the qualified paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If salvage is required, recommendations shall be consistent with current professional standards outlined in the Society of Vertebrate Paleontology,</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-3 (cont.)		<p>Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines. If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection.</p> <p>Mitigation Measure M-CP-3d: Monitoring by a qualified paleontologist during ground disturbing activities.</p> <p>If fossils are discovered during construction, a qualified paleontologist shall determine whether monitoring shall be required during remaining ground disturbing activities. If required, a qualified paleontologist, a California Professional Geologist with appropriate paleontological expertise, or paleontological monitor working under the supervision of a qualified paleontologist shall monitor ground-disturbing activities. This monitoring shall consist of periodically inspecting disturbed, graded, and excavated surfaces, as well as soil stockpiles and disposal sites. The frequency of monitoring would be determined by the qualified paleontologist. If the monitor encounters a paleontological resource, he or she shall assess the fossil, and record or salvage it as described in M-CP-2c.</p>	
CP-4: The proposed project could disturb human remains, including those interred outside of formal cemeteries.	Significant	<p>Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.</p> <p>The following measures shall be implemented in the event of the discovery, or anticipated discovery, of human remains and associated burial-related cultural materials:</p> <p>The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities shall comply with applicable state laws. This shall include immediate notification of the coroner of the county within which the project is located and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archeological consultant, the project sponsor, ERO and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Cultural and Paleontological Resources (cont.)			
CP-4 (cont.)		(CEQA Guidelines Section 15064.5[d]). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project sponsor shall follow Section 5097.98(b) of the PRC, which states that “the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.”	
Transportation and Circulation			
TR-6: Construction under the proposed project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.	Significant	<p>Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.</p> <p>The project sponsor shall implement the following measure:</p> <p>To reduce potential delays and conflicts between construction activities and various modes of transportation, the project sponsor and its construction contractor(s) shall prepare a traffic control plan(s) for project construction. The project sponsor and construction contractor(s) shall meet with residents, neighbors, DPW, SFMTA, the Fire Department, SFUSD, Muni Operations, and other City agencies to coordinate feasible measures to reduce transportation conflicts and delays, including temporary transit stop relocations, transit service re-routing, adequate emergency access route(s), and other measures to reduce traffic and transit disruption, pedestrian and bicycle circulation effects, and interference with emergency access during construction of the proposed project. The contractor would be required to comply with the City and County of San Francisco’s Regulations for Working in San Francisco Streets, which establish rules and permit requirements so that construction activities can be done safely while minimizing interference with pedestrians, bicyclists, transit, and vehicular traffic.</p> <p>The coordinated plan shall include measures that address street closures, and ensure safe access to the McLaren Early Education School and all occupied</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Transportation and Circulation (cont.)			
TR-6 (cont.)		<p>residences. It shall also include, but may not be limited to, the following elements:</p> <ul style="list-style-type: none"> • Advisory signs shall be erected several weeks in advance to inform the public of planned street closures in the area. During each construction phase, street closure signs and detour routes shall be posted to direct vehicles to use alternative routes to access the project site. • Emergency vehicle access shall be maintained to the school and all other occupied units and buildings at all times using the temporary streets, detour routes, and/or flagpersons. • Construction staging and worker parking shall occur within the 48-acre Sunnydale-Velasco project site. • The construction contractor shall coordinate with school administrators to ensure safe access to and from the school for students, teachers, and parents at all times. The contractors should inquire as to the school start and dismissal times and schedule construction vehicle trips outside of the peak school drop-off and pick up hours to the extent feasible. If avoiding these hours is infeasible, the construction contractor shall provide additional flaggers during school drop-off and pick-up hours near school. • To the extent applicable, the traffic control plan shall conform to Caltrans's Manual of Traffic Controls for Construction and Maintenance Work Zones. 	
Noise			
NO-1: The proposed project would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels.	Significant	<p>Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.</p> <p>The project sponsor shall incorporate the following practices into the construction specifications documents to be implemented by the project contractor:</p> <ul style="list-style-type: none"> • Provide enclosures and mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy operations, such as grading or use of concrete saws within 50 feet of an occupied sensitive land use. 	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Noise (cont.)			
NO-1 (cont.)		<ul style="list-style-type: none"> • Use construction equipment with lower (less than 70 dB) noise emission ratings whenever possible, particularly air compressors and generators. • Do not use equipment on which sound-control devices provided by the manufacturer have been altered to reduce noise control. • Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from these sensitive receptors. • Prohibit unnecessary idling of internal combustion engines. • Require applicable construction-related vehicles and equipment to use designated truck routes to access the project site. Construction traffic should be routed along Geneva Avenue, Brookdale Avenue and Santos Street and should be managed to avoid peak periods. • Implement noise attenuation measures to the extent feasible (i.e., such that they do not impede efficient operation of equipment or dramatically slow production rates), which may include, but are not limited to, noise barriers or noise blankets. The placement of such attenuation measures shall be reviewed and approved by the Director of Public Works prior to issuance of development permit for construction <p>Designate a Noise Disturbance Coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the Noise Disturbance Coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.</p> <p>Mitigation Measure M-NO-1b: Noise Reduction Building Strategies.</p> <p>For new residential development located along Sunnydale Avenue and Santos Street, the Planning Department and Department of Building Inspection shall require the sponsor to use building materials sufficient to maintain an interior noise level of 45 dBA DNL. The determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable interior noise level can be met. There</p>	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Noise (cont.)			
NO-1 (cont.)		<p>are a number of measures that could be implemented to achieve this standard. Some examples include:</p> <ul style="list-style-type: none"> • Installation of forced-air ventilation and sound rated construction materials. • Installation of noise insulation features such as stucco-sided walls with resilient furring elements and sound-rate windows and doors. <p>Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.</p> <p>To minimize effects on residential development at the project site, the Planning Department, through its building permit review process and in conjunction with the noise analysis set forth in Mitigation Measure M-NO-1b, shall require that open space required under the <i>Planning Code</i> for residential uses be protected, to the maximum feasible extent, from existing ambient noise levels sufficient to maintain an exterior noise level of 70 dBA DNL for outdoor open spaces. The determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable interior noise level can be met. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.</p>	
Air Quality			
AQ-1: Construction of the proposed project would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.	Significant	<p>Mitigation Measure M-AQ-1: Construction Emissions Minimization</p> <p>A. <i>Construction Emissions Minimization Plan.</i> Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the Environmental Review Officer (ERO) for review and approval by an Environmental Planning Air Quality Specialist. The Plan shall detail project compliance with the following requirements:</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Air Quality (cont.)			
AQ-1 (cont.)		<ol style="list-style-type: none"> 1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: <ol style="list-style-type: none"> a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited; b) All off-road equipment shall have: <ol style="list-style-type: none"> i. Engines that meet or exceed either U.S. EPA or California Air Resources Board (ARB) Tier 3 off-road emission standards, and ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).⁴ c) Exceptions: <ol style="list-style-type: none"> i. Exceptions to A(1)(a) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply. Under this circumstance, the sponsor shall submit documentation of compliance with A(1)(b) for onsite power generation. ii. Exceptions to A(1)(b)(ii) <i>may</i> be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that a particular piece of off-road equipment with an ARB Level 3 VDECS is: (1) technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted 	

⁴ Equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required.

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation												
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)															
Air Quality (cont.)															
AQ-1 (cont.)		<p>with an ARB Level 3 VDECS and the sponsor has submitted documentation to the ERO that the requirements of this exception provision apply. If granted an exception to A(1)(b)(ii), the project sponsor must comply with the requirements of A(1)(c)(iii).</p> <p>iii. If an exception is granted pursuant to A(1)(c)(ii), the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedules in Table M-AQ-1-1 and shall provide documentation that emissions are sufficiently reduced to ensure criteria air pollutants, excess cancer risks and PM2.5 concentrations do not exceed significance criteria.</p> <p style="text-align: center;">TABLE M-AQ-1-1 OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE</p> <table><tr><th>Compliance Alternative</th><th>Engine Emission Standard</th><th>Emissions Control</th></tr><tr><td>1</td><td>Tier 2</td><td>ARB Level 3 VDECS</td></tr><tr><td>2</td><td>Tier 2</td><td>ARB Level 2 VDECS</td></tr><tr><td>3</td><td>Tier 2</td><td>ARB Level 1 VDECS</td></tr></table> <p>How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.</p> <p>2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road</p>	Compliance Alternative	Engine Emission Standard	Emissions Control	1	Tier 2	ARB Level 3 VDECS	2	Tier 2	ARB Level 2 VDECS	3	Tier 2	ARB Level 1 VDECS	
Compliance Alternative	Engine Emission Standard	Emissions Control													
1	Tier 2	ARB Level 3 VDECS													
2	Tier 2	ARB Level 2 VDECS													
3	Tier 2	ARB Level 1 VDECS													

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Air Quality (cont.)			
AQ-1 (cont.)		<p>and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit.</p> <p>3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications.</p> <p>4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used.</p> <p>5. The Plan shall be kept on-site and available for review by any persons requesting it and a legible sign shall be posted at the perimeter of the construction site indicating to the public the basic requirements of the Plan and a way to request a copy of the Plan. The project sponsor shall provide copies of Plan to members of the public as requested.</p> <p>B. <i>Reporting.</i> Quarterly reports shall be submitted to the ERO indicating the construction phase and off-road equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.</p> <p>Within six months of the completion of construction activities, the project sponsor shall submit to the ERO a final report summarizing construction</p>	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Air Quality (cont.)			
AQ-1 (cont.)		activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used. C. <i>Certification Statement and On-site Requirements.</i> Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.	
AQ-3: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations.	Significant	Mitigation Measure M-AQ-1: Constructions Emissions Minimization (see above)	Less than Significant
Recreation			
RE-2: The proposed project would include the construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment.	Significant	Mitigation Measure M-CP-2: Archeological Testing Program. (see above) Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains. (see above) Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction. (see above) Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey. (see below)	Less than Significant
Utilities and Service Systems			
UT-2: The proposed project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Significant	Mitigation Measure M-CP-2: Archeological Testing Program. (see above) Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains. (see above) Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction. (see above) Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey. (see below)	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Utilities and Service Systems (cont.)			
UT-3: The proposed project would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Significant	Mitigation Measure M-CP-2: Archeological Testing Program. (see above) Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains. (see above) Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction. (see above) Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey. (see below)	Less than Significant
Biological Resources			
BI-1: The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	Significant	Mitigation Measure M-BI-1a: Protection of Special Status Bat Species: The project sponsor shall implement the following measures: <ul style="list-style-type: none"> • Prior to construction or demolition activities within 250 feet of trees/structures with at least a moderate potential to support special-status bats, a qualified biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle and collect bats) shall survey for bats. If no evidence of bats (i.e., visual or acoustic detection, guano, staining, strong odors) is present, no further mitigation is required. • If special-status bats raising pups (also called a maternity colony) are identified within 250 feet of the project area during preconstruction surveys or project construction (typically, maternity colonies are active April 15th through August 15th), the project sponsor shall create a no-disturbance buffer acceptable in size to CDFW around the bat roosts. Bat roosts initiated within 250 feet of the project area after construction has already begun are presumed to be unaffected by project-related disturbance, and no buffer would be necessary. However, the “take” of individuals (e.g., direct mortality of individuals, or destruction of roosts while bats are present) is prohibited. • Trees or buildings with evidence of special-status bat activity shall be removed during the time that is least likely to affect bats as determined by a qualified bat biologist (in general, roosts should not be removed if maternity bat roosts are present, typically April 15th through August 15th, and roosts should not be removed if present bats are in torpor, typically when temperatures are less 	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Biological Resources (cont.)			
BI-1 (cont.)		<p>than 40 degrees Fahrenheit). Non-maternity bat roosts shall be removed by a qualified biologist, by either making the roost unsuitable for bats by opening the roost area to allow airflow through the cavity, or excluding the bats using one-way doors, funnels, or flaps.</p> <ul style="list-style-type: none"> All special-status bat roosts that are destroyed shall be replaced at a 1:1 ratio with a roost suitable for the displaced species. The type of created roosting habitat would be reflective of the habitat preference of the displaced species and would be determined by the bat biologist. An example would be bat boxes for colonial roosters. The roost shall be modified as necessary to provide a suitable roosting environment for the target bat species. <p>Mitigation Measure M-BI-1b: Protection of Nesting Birds: The project sponsor shall implement the following:</p> <ul style="list-style-type: none"> Preconstruction bird surveys shall be conducted by a qualified biologist during the breeding season (breeding season is defined as February 1st through August 15th) if tree removal or building demolition is scheduled to take place during the breeding season. For raptors, a preconstruction survey for nests and nesting birds shall be conducted within 2 weeks prior to initiation of construction activities if work shall occur during the breeding season. A qualified biologist shall survey all potential nesting sites in the construction limits and within 300 feet and in line of sight of the construction limits. If active nests are located, work shall not occur within 300 feet of the nest until an appropriate buffer zone has been established in coordination with the appropriate agencies (i.e., USFWS and/or CDFW). For other nesting birds protected by the Migratory Bird Treaty Act, a preconstruction survey for active nests shall be conducted by a qualified biologist no more than 2 weeks before construction if work shall occur during the breeding season. The survey shall be conducted within 100 feet of the work areas. If construction would affect the nest, then work shall not occur within 100 feet of the nest until a qualified biologist, in coordination with the appropriate agencies, has established an appropriate buffer zone. 	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Biological Resources (cont.)			
BI-1 (cont.)		<ul style="list-style-type: none"> Special-status birds that establish nests during the construction period are considered habituated to such activity and no buffer shall be required, except as needed to avoid direct destruction of the nest, which would still be prohibited. <p>Outside of the breeding season (August 16th through January 31st), or after young birds have fledged, as determined by the biologist, work activities may proceed.</p>	
Hazards and Hazardous Materials			
HZ-1: The proposed project could create a significant hazard through routine transport, use, disposal, handling or emission of hazardous materials.	Significant	<p>Mitigation Measure M-HZ-1: Hazardous Building Materials.</p> <p>The project sponsor shall ensure that PCB-containing equipment, such as fluorescent light ballasts and other potentially hazardous building materials, are removed and properly disposed of prior to the start of demolition. Old light ballasts that would be removed during demolition would be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast could not be verified, then they would be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous materials identified either before or during demolition would be abated according to federal, state, and local laws and regulation.</p> <p>Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey (see below)</p>	Less than Significant
HZ-2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	Significant	<p>Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey</p> <p>The project sponsor shall retain a qualified environmental consulting firm to prepare a Site Mitigation Plan (SMP) to address the possible discovery of unexpected contaminants during construction. The SMP shall specify procedures to follow upon discovery of suspect soils and include appropriate notification, handling, and disposal protocols. The SMP shall also include contingency response actions, worker health and safety protocols, stormwater protection measures, dust mitigation in accordance with San Francisco Health Code Article 22B, and noise control in accordance with San Francisco Noise Ordinance.</p>	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
2. SIGNIFICANT BUT MITIGABLE IMPACTS (cont.)			
Hazards and Hazardous Materials (cont.)			
HZ-2 (cont.)		<p>The project sponsor shall also prepare work plan describing, procedures for the completion of a radon soil vapor survey to be conducted prior to construction.</p> <p>The SMP and radon soil survey work plan shall be submitted to the San Francisco Department of Public Health for review and approval prior to commencement of construction activities.</p>	
3. LESS-THAN-SIGNIFICANT IMPACTS			
Land Use			
LU-1: The proposed project would not physically divide an established community.	Less than Significant	None required.	Less than Significant
LU-2: The proposed project would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	None required.	Less than Significant
LU-3: The proposed project would not have a substantial adverse effect on the existing character of the project site and vicinity.	Less than Significant	None required.	Less than Significant
CC-LU: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.	Less than Significant	None required.	Less than Significant
Socioeconomics / Population and Housing			
PH-1: The proposed project would not induce substantial population growth, either directly or indirectly.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Socioeconomics / Population and Housing (cont.)			
PH-2: The proposed project would displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere.	Less than Significant	None required.	Less than Significant
CC-PH: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative population and housing impacts.	Less than Significant	None required.	Less than Significant
Cultural and Paleontological Resources			
CP-1: The proposed project would not cause a substantial adverse change in the significance of a historical resource, including those resources listed in Article 10 or Article 11 of the San Francisco <i>Planning Code</i> .	No Impact	None required.	No Impact
CC-CP: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative cultural resource impacts.	No Impact	None required.	No Impact
Transportation and Circulation			
TR-1: The proposed project would not cause levels of service at local intersections substantially to deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	Improvement Measure I-TR-A: The SFMTA could add a left-turn pocket on the northbound approach on Sunnydale Avenue at Persia Street and a right-turn pocket on the eastbound approach on Persia Avenue at Sunnydale Avenue. Improvement Measure I-TR-B: The SFMTA could add a right-turn pocket on the southbound approach on Brookdale Avenue at Geneva Avenue. Improvement Measure I-TR-C: The SFMTA could add a right-turn pocket on the southbound approach on Santos Street at Geneva Avenue.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Transportation and Circulation (cont.)			
TR-2: The proposed project would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	None required.	Less than Significant
TR-3: The proposed project would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less than Significant	None required.	Less than Significant
TR-4: The proposed project would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.	Less than Significant	Improvement Measure I-TR-D: The project sponsor could work with Recology, the City's designated trash, recycling, and compost hauler, and with the San Francisco Department of the Environment and the SFMTA's Sustainable Streets Division as master planning proceeds to the schematic design stage for the proposed buildings, to ensure that trash, recycling, and composting facilities are designed to ensure maximum diversion of trash from the City's landfill and that the collection bins are stored in such locations to maximize efficiency in container pickup and minimize traffic disruption during collection.	Less than Significant
TR-5: The proposed project would not result in inadequate emergency access.	Less than Significant	None required.	Less than Significant
CC-TR-2: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Noise			
NO-2: The proposed project would not result in exposure or residents or generation of excessive groundborne vibration or groundborne noise levels.	Less than Significant	None required.	Less than Significant
NO-3: The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Less than Significant	None required.	Less than Significant
CC-NO: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse noise impacts.	Less than Significant	None required.	Less than Significant
Air Quality			
AQ-2: During project operations, the proposed project would not result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.	Less than Significant	None required.	Less than Significant
AQ-4: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan.	Less than Significant	None required.	Less than Significant
AQ-5: The proposed project would not create objectionable odors that would affect a substantial number of people.	Less than Significant	None required.	Less than Significant
Greenhouse Gas Emissions			
GG-1: The proposed project would be consistent with the City's GHG Reduction Plan and the AB 32 Scoping Plan, and would, therefore, not result in a cumulatively considerable contribution to significant cumulative GHG emissions or conflict with any policy, plan, or regulation adopted for the purpose of reducing GHG emissions.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Wind and Shadow			
WS-1: The proposed project would not alter wind in a manner that substantially affects public areas.	Less than Significant	None required.	Less than Significant
WS-2: The proposed project would not create new shadow in a manner that would affect the use of any park or open space under the jurisdiction of, or designated for acquisition by, the Recreation and Park Department, or other public area.	Less than Significant	None required.	Less than Significant
CC-WS: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse wind and shadow impacts.	Less than Significant	None required.	Less than Significant
Recreation			
RE-1: The proposed project would increase the use of existing neighborhood and regional parks or other recreational facilities, but not such that substantial physical deterioration of the facilities would occur or be accelerated.	Less than Significant	None required.	Less than Significant
RE-3: The proposed project would not physically degrade existing recreational resources.	Less than Significant	None required.	Less than Significant
CC-RE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse recreation impacts.	Less than Significant	None required.	Less than Significant
Utilities and Service Systems			
UT-1: The proposed project would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Utilities and Service Systems (cont.)			
UT-4: The proposed project would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements.	Less than Significant	None required.	Less than Significant
UT-5: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	Less than Significant	None required.	Less than Significant
UT-6: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.	Less than Significant	None required.	Less than Significant
CC-UT: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts.	Less than Significant	None required.	Less than Significant
Public Services			
PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, (or the)need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries.	Less than Significant	None required.	Less than Significant
CC-PS: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impacts.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Biological Resources			
BI-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	No Impact	None required.	No Impact
BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	No Impact	None required.	No Impact
BI-4: The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less than Significant	None required.	Less than Significant
BI-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less than Significant	None required.	Less than Significant
BI-6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	No Impact	None required.	No Impact
CC-BI: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Geology and Soils			
GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic ground-shaking, liquefaction, or lateral spreading.	Less than Significant	None required.	Less than Significant
GE-2: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	Less than Significant	None required.	Less than Significant
GE-3: The proposed project would not result in substantial soil erosion or the loss of topsoil.	Less than Significant	None required.	Less than Significant
GE-4: The proposed project would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Less than Significant	None required.	Less than Significant
GE-5: The proposed project would not be located on expansive soil, as defined in Chapter 18 of the California Building Code, creating substantial risks to life or property.	Less than Significant	None required.	Less than Significant
GE-6: The proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	No Impact	None required.	No Impact
GE-7: The proposed project would not change substantially the topography or any unique geologic or physical features of the site.	Less than Significant	None required.	Less than Significant
CC-GE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse geologic impacts.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Hydrology and Water Quality			
HY-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	Less than Significant	None required.	Less than Significant
HY-2: The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	Less than Significant	None required.	Less than Significant
HY-3: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion of siltation on- or off-site.	Less than Significant	None required.	Less than Significant
HY-4: The proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less than Significant	None required.	Less than Significant
HY-5: The proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows.	No Impact	None required.	No Impact
HY-6: 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.	No Impact	None required.	No Impact
HY-7: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	No Impact	None required.	No Impact

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Hydrology and Water Quality (cont.)			
CC-HY: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse impacts to hydrology or water quality.	Less than Significant	None required.	Less than Significant
Hazards and Hazardous Materials			
HZ-3: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less than Significant	None required.	Less than Significant
HZ-4: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.	No Impact	None required.	No Impact
HZ-5: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than Significant	None required.	Less than Significant
HZ-6: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires.	Less than Significant	None required.	Less than Significant
CC-HZ: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse hazards impacts.	Less than Significant	None required.	Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, AND IMPROVEMENT MEASURES FOR THE
PROPOSED SUNNYDALE-VELASCO HOPE SF MASTER PLAN PROJECT AND VARIANT UNDER CEQA

Potential Impact	Level of Significance Prior to Mitigation	Mitigation Measures / Improvement Measures	Level of Significance After Mitigation
3. LESS-THAN-SIGNIFICANT IMPACTS (cont.)			
Mineral and Energy Resources			
ME-1: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	No Impact	None required.	No Impact
ME-2: The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	No Impact	None required.	No Impact
ME-3: The proposed project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.	Less than Significant	None required.	Less than Significant
CC-ME: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative mineral and energy resource impacts.	Less than Significant	None required.	Less than Significant
Agricultural and Forest Resources			
AG-1: Construction and operation of the proposed project would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.	No Impact	None required.	No Impact
CC-AG: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts.	No Impact	None required.	No Impact

TABLE S-3
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Land Use and Recreation				
Plan consistency	LU-2: The proposed project would not be inconsistent with applicable land use plans and policies. (LTS)	A-LU-2: Similar to the proposed project. (LTS)	B-LU-2: Similar to but less than the proposed project. (LTS)	C-LU-2: Less than the proposed project (NI).
Existing character	LU-3: The proposed project would not be incompatible with surrounding development. (LTS)	A-LU-3: Similar to the proposed project. (LTS)	B-LU-3: Similar to but less than the proposed project. (LTS)	C-LU-3: Less than the proposed project (NI).
Cumulative	CC-LU: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts. (LTS)	CC-A-LU: Similar to the proposed project. (LTS)	CC-B-LU: Less than the proposed project. (NI)	CC-C-LU: Less than the proposed project (NI).
Visual Quality / Aesthetics				
Effects on Views	AE-1: The proposed project would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources. (LTS)	A-AE-1: Similar to the proposed project. (LTS)	B-AE-1: Similar to but less than the proposed project. (LTS)	C-AE-1: Less than the proposed project. (NI)
Visual character	AE-2: The proposed project would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area. (LTS)	A-AE-2: Similar to the proposed project. (LTS)	B-AE-2: Similar to but less than the proposed project. (LTS)	C-AE-2: Less than the proposed project. (NI)
Cumulative	CC-AE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative visual quality / aesthetics impacts. (NI)	CC-A-AE: Similar to the proposed project. (NI)	CC-B-AE: Similar to the proposed project. (NI)	CC-C-AE: Similar to the proposed project. (NI)
Socioeconomics / Population and Housing				
Population growth	PH-1: The proposed project would not induce a substantial amount of unplanned growth. (NI)	A-PH-1: Similar to the proposed project. (NI)	B-PH-1: Similar to but less than the proposed project. (NI)	C-PH-1: Less than the proposed project. (NI)
Displacement	PH-2: The proposed project would result in displacement of existing residents. (LTS)	A-PH-2: Similar to the proposed project. (LTS)	B-PH-2: Similar to the proposed project. (LTS)	C-PH-2: Less than the proposed project. (NI)
Physical barriers	PH-3: The proposed project would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group. (SB)	A-PH-3: Similar to the proposed project. (SB)	B-PH-3: Less than the proposed project. (NI)	C-PH-3: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Socioeconomics / Population and Housing (cont.)				
Employment	PH-4: The proposed project would not cause a decrease in local or regional employment. (NI)	A-PH-4: Similar to the proposed project. (NI)	B-PH-4: Similar to the proposed project. (NI)	C-PH-4: Less than the proposed project. (NI)
Cumulative	CC-PH: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative socioeconomics impacts. (LTS)	CC-A-PH: Similar to the proposed project. (LTS)	CC-B-PH: Similar to the proposed project. (LTS)	CC-C-PH: Similar to the proposed project. (NI)
Environmental Justice				
Environmental Justice	EJ-1: The proposed project would not result in a substantial impact that disproportionately affects low-income and minority populations. (NI)	A-EJ-1: Similar to the proposed project. (NI)	B-EJ-1: Similar to the proposed project. (NI)	C-EJ-1: Less than the proposed project. (NI)
Cumulative	CC-EJ: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in substantial environmental transportation impacts that disproportionately affect low-income and minority populations. (LTS)	CC-A-EJ: Similar to the proposed project. (LTS)	CC-B-EJ: Less than the proposed project. (NI)	CC-C-EJ: Less than the proposed project. (NI)
Cultural Resources				
Historic architectural resource	CP-1: The proposed project would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (NI)	A-CP-1: Similar to the proposed project. (NI)	B-CP-1: Similar to the proposed project. (NI)	C-CP-1: Less than the proposed project. (NI)
Archaeological resource	CP-2: The proposed project could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (SM)	A-CP-2: Similar to the proposed project. (SM)	B-CP-2: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)
Human Remains	CP-4: The proposed project could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior. (SM)	A-CP-4: Similar to the proposed project. (SM)	B-CP-4: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Cultural Resources (cont.)				
Consistency with Plans	CP-5: The proposed project could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. (SM)	A-CP-5: Similar to the proposed project. (SM)	B-CP-5: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)
Cumulative	CC-CP: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative cultural resource impacts. (NI)	CC-A-CP: Similar to the proposed project. (NI)	CC-B-CP: Similar to the proposed project. (NI)	CC-C-CP: Less than the proposed project. (NI)
Transportation and Circulation				
Intersection Levels of Service	TR-1: The proposed project would not cause levels of service at local intersections to substantially deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system at those locations. (LTS)	A-TR-1: Similar to but less than the proposed project. (LTS)	B-TR-1: Less than the proposed project. (NI)	C-TR-1: Less than the proposed project. (NI)
Transit	TR-2: The proposed project would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (LTS)	A-TR-2: Similar to the proposed project. (LTS)	B-TR-2: Less than the proposed project. (NI)	C-TR-2: Less than the proposed project. (NI)
Pedestrians and Cyclists	TR-3: The proposed project would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (LTS)	A-TR-3: Similar to the proposed project. (LTS)	B-TR-3: Less than the proposed project. (NI)	C-TR-3: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Transportation and Circulation (cont.)				
Loading	TR-4: The proposed project would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (LTS)	A-TR-4: Similar to the proposed project. (LTS)	B-TR-4: Less than the proposed project. (NI)	C-TR-4: Less than the proposed project. (NI)
Emergency Access	TR-5: The proposed project would not result in inadequate emergency access. (LTS)	A-TR-5: Similar to the proposed project. (LTS)	B-TR-5: Less than the proposed project. (NI)	C-TR-5: Less than the proposed project. (NI)
Construction	TR-6: Construction under the proposed project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (SM)	A-TR-6: Similar to but less than the proposed project. (SM)	B-TR-6: Similar to but less than the proposed project. (SM)	C-TR-6: Less than the proposed project. (NI)
Cumulative Traffic	CC-TR-1: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (SU)	CC-A-TR-1: Similar to but less than the proposed project. (SU)	CC-B-TR-1: Less than the proposed project. (NI)	CC-C-TR-1: Less than the proposed project. (NI)
Cumulative Transit	CC-TR-2: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers. (LTS)	CC-A-TR-2: Similar to but less than the proposed project. (LTS)	CC-B-TR-2: Less than the proposed project. (LTS)	CC-C-TR-2: Less than the proposed project. (NI)
Noise				
Noise standards	NO-1: The proposed project would generate construction noise that would not comply with local standards and would result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation. (SM)	A-NO-1: Similar to the proposed project. (SM)	B-NO-1: Similar to but less than the proposed project. (SM)	C-NO-1: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Noise (cont.)				
Vibration	NO-2: The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. (LTS)	A-NO-2: Similar to the proposed project. (LTS)	B-NO-2: Similar to but less than the proposed project. (LTS)	C-NO-2: Less than the proposed project. (NI)
Ambient Noise	NO-3: The proposed project would not result in a substantial permanent increase in ambient noise levels for existing off-site receptors. (LTS)	A-NO-3: Similar to the proposed project. (LTS)	B-NO-3: Less than the proposed project. (NI)	C-NO-3: Less than the proposed project. (NI)
Cumulative	CC-NO: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse noise impacts. (LTS)	CC-A-NO: Similar to the proposed project. (LTS)	CC-B-NO: Similar to but less than the proposed project. (LTS)	CC-C-NO: Less than the proposed project. (NI)
Air Quality				
Clean Air Act	AQ-6: The proposed project would not generate federal non-attainment criteria pollutants or their precursors in quantities that would trigger the need for a general conformity assessment. (LTS)	A-AQ-6 : Less than the proposed project. (LTS)	B-AQ-6 : Less than the proposed project. (LTS)	C-AQ-6: Less than the proposed project. (NI)
Greenhouse Gases				
GHG Impact	GG-1: The proposed project would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO ₂ e) per year. (LTS)	A-GG-1: Similar to the proposed project. (LTS)	B-GG-1: Less than the proposed project. (NI)	C-GG-1: Less than the proposed project. (NI)
Recreation				
Increased use	RE-1: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation. (LTS)	A-RE-1: Similar to but less than the proposed project. (LTS)	B-RE-1: Less than the proposed project. (LTS)	C-RE-1: Less than the proposed project. (NI)
Cumulative	CC-RE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse recreation impacts. (LTS)	CC-A-RE: Similar to but less than the proposed project. (LTS)	CC-B-RE: Less than the proposed project. (LTS)	CC-C-RE: Less than the proposed project. (NI)

Legend

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TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Utilities and Service Systems				
Wastewater treatment requirements	UT-1: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment. (LTS)	A-UT-1: Similar to but less than the proposed project. (LTS)	B-UT-1: Less than the proposed project. (NI)	C-UT-1: Less than the proposed project. (NI)
Drainage facilities	UT-3: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment. (LTS)	A-UT-3: Similar to the proposed project. (LTS)	B-UT-3: Similar to the proposed project. (LTS)	C-UT-3: Less than the proposed project. (NI)
Water supply	UT-4: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply. (LTS)	A-UT-4: Similar to but less than the proposed project. (LTS)	B-UT-4: Less than the proposed project. (NI)	C-UT-4: Less than the proposed project. (NI)
Landfill capacity	UT-5: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal. (LTS)	A-UT-5: Similar to but less than the proposed project. (LTS)	B-UT-5: Less than the proposed project. (LTS)	C-UT-5: Less than the proposed project. (NI)
Cumulative	CC-UT: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts. (LTS)	CC-A-UT: Similar to but less than the proposed project. (LTS)	CC-B-UT: Similar to but less than the proposed project. (LTS)	CC-C-UT: Less than the proposed project. (NI)
Public Services				
Service capacity	PS-1: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries. (LTS)	A-PS-1: Similar to but less than the proposed project. (LTS)	B-PS-1: Similar to but less than the proposed project. (LTS)	C-PS-1: Less than the proposed project. (NI)
Cumulative	CC-PS: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impacts. (LTS)	CC-A-PS: Similar to but less than the proposed project. (LTS)	CC-B-PS: Less than the proposed project. (NI)	CC-C-PS: Less than the proposed project. (NI)

Legend

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TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Biological Resources				
Candidate, sensitive, or special-status species	BI-1: The proposed project would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species. (SM)	A-BI-1: Similar to the proposed project. (SM)	B-BI-1: Similar to the proposed project. (SM)	C-BI-1: Less than the proposed project. (NI)
Riparian habitat or other sensitive natural community	BI-2: The proposed project would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level). (NI)	A-BI-2: Similar to the proposed project. (NI)	B-BI-2: Similar to the proposed project. (NI)	C-BI -2: Less than the proposed project. (NI)
Wetlands	BI-3: The proposed project would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act. (NI)	A-BI-3: Similar to the proposed project. (NI)	B-BI-3: Similar to the proposed project. (NI)	C-BI -3: Less than the proposed project. (NI)
Migratory fish or wildlife species	BI-4: The proposed project would not interfere substantially with an existing wildlife corridor. (LTS)	A-BI-4: Similar to the proposed project. (LTS)	B-BI-4: Similar to the proposed project. (LTS)	C-BI -4: Less than the proposed project. (NI)
Local policies	BI-5: The proposed project would not have a substantial adverse effect on locally-protected trees. (LTS)	A-BI-5: Similar to the proposed project. (LTS)	B-BI-5: Similar to the proposed project. (LTS)	C-BI -5: Less than the proposed project. (NI)
Habitat Conservation Plan	BI-6: The proposed project would not conflict with an adopted habitat conservation plan. (NI)	A-BI-6: Similar to the proposed project. (NI)	B-BI-6: Similar to the proposed project. (NI)	C-BI -6: Less than the proposed project. (NI)
Cumulative	CC-BI: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts. (LTS)	CC-A-BI: Similar to the proposed project. (LTS)	CC-B-BI: Similar to the proposed project. (LTS)	CC-C-BI: Less than the proposed project. (NI)
Geology and Soils				
Fault rupture, seismic ground-shaking, liquefaction, or lateral spreading	GE-1: The proposed project would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils. (LTS)	A-GE-1: Similar to the proposed project. (LTS)	B-GE-1: Similar to the proposed project. (LTS)	C-GE-1: Greater than the proposed project. (LTS)

Legend

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SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Geology and Soils (cont.)				
Slope Failure	GE-2: The proposed project would not expose people or structures to substantial threat of injury or damage from slope failure. (LTS)	A-GE-2: Similar to the proposed project. (LTS)	B-GE-2: Similar to the proposed project. (LTS)	C-GE-2: Greater than the proposed project. (LTS)
Erosion	GE-3: The proposed project would not cause substantial soil erosion. (LTS)	A-GE-3: Similar to the proposed project. (LTS)	B-GE-3: Less than the proposed project. (LTS)	C-GE-3: Less than the proposed project. (LTS)
Accelerate geologic processes	GE-4: The proposed project would not destabilize existing geologic conditions or accelerate adverse geologic processes. (LTS)	A-GE-4: Similar to the proposed project. (LTS)	B-GE-4: Similar to the proposed project. (LTS)	C-GE-4: Less than the proposed project. (LTS)
Cumulative	CC-GE: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to geology or soils. (LTS)	CC-A-GE: Similar to the proposed project. (LTS)	CC-B-GE: Similar to the proposed project. (LTS)	CC-C-GE: Greater than the proposed project. (LTS)
Hydrology and Water Quality				
Waste quality standards	HY-1: The proposed project would not result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards). (LTS)	A-HY-1: Similar to the proposed project. (LTS)	B-HY-1: Similar to the proposed project. (LTS)	C-HY-1: Less than the proposed project. (NI)
Groundwater	HY-2: The proposed project would not result in depletion of groundwater volume or degradation of groundwater quality. (LTS)	A-HY-2: Similar to the proposed project. (LTS)	B-HY-2: Similar to the proposed project. (LTS)	C-HY-2: Less than the proposed project. (NI)
Drainage	HY-3: The proposed project would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts. (LTS)	A-HY-3: Similar to the proposed project. (LTS)	B-HY-3: Similar to but less than the proposed project. (LTS)	C-HY-3: Less than the proposed project. (NI)
Flooding	HY-5: The proposed project would not locate occupied structures where there are potential risks associated with flooding. (NI)	A-HY-5: Similar to the proposed project. (NI)	B-HY-5: Similar to the proposed project. (NI)	C-HY-5: Similar to the proposed project. (NI)
Cumulative	CC-HY: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to hydrology or water quality. (LTS)	CC-A-HY: Similar to the proposed project. (LTS)	CC-B-HY: Similar to the proposed project. (LTS)	CC-C-HY: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Hazards and Hazardous Materials				
Environmental Hazard	HZ-1: The proposed project could result in a human health or environmental hazard through the use or disposal of hazardous substances. (SM)	A-HZ-1: Similar to the proposed project. (SM)	B-HZ-1: Similar to the proposed project. (SM)	C-HZ-1: Less than the proposed project. (LTS)
Upset and accident conditions involving hazardous materials	HZ-2: The proposed project could result in the release of hazardous substances that creates a human health or environmental hazard. (SM)	A-HZ-2: Similar to the proposed project. (SM)	B-HZ-2: Similar to the proposed project. (SM)	C-HZ-2: Less than the proposed project. (LTS)
Hazardous site	HZ-4: The proposed project would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes. (LTS)	A-HZ-4: Similar to the proposed project. (LTS)	B-HZ-4: Similar to the proposed project. (LTS)	C-HZ-4: Less than the proposed project. (LTS)
Fires	HZ-6: The proposed project would be located at an acceptable separation distance from a fire or explosive hazard. (LTS)	A-HZ-6: Similar to the proposed project. (LTS)	B-HZ-6: Similar to the proposed project. (LTS)	C-HZ-6: Similar to the proposed project. (LTS)
Cumulative	CC-HZ: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative hazards or hazardous materials impacts. (LTS)	CC-A-HZ: Similar to the proposed project. (LTS)	CC-B-HZ: Similar to the proposed project. (LTS)	CC-C-HZ: Less than the proposed project. (NI)
Energy Resources				
Energy Consumption	ME-3: The project would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider. (LTS)	A-ME-3: Similar to the proposed project. (LTS)	B-ME-3: Less than the proposed project. (LTS)	C-ME-3: Less than the proposed project. (NI)
Cumulative	CC-ME: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative energy impacts. (LTS)	CC-A-ME: Similar to the proposed project. (LTS)	CC-B-ME: Similar to the proposed project. (LTS)	CC-C-ME: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-3 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO IMPACTS OF THE PROPOSED PROJECT UNDER NEPA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Agricultural & Forestry Resources				
Conversion of farmland or forest land	AG-1: Construction and operation of the proposed project would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry. (NI)	A-AG-1: Similar to the proposed project. (NI)	B-AG-1: Similar to the proposed project. (NI)	A-AG-1: Similar to the proposed project. (NI)
Cumulative	CC-AG: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts. (NI)	CC-A-AG: Similar to the proposed project. (NI)	CC-B-AG: Similar to the proposed project. (NI)	CC-C-AG: Similar to the proposed project. (NI)

Legend

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SM Less-than-Significant impact with mitigation
SU Significant unavoidable impact

SB Significant and Beneficial
NI No impact

TABLE S-4
COMPARISON OF IMPACTS OF ALTERNATIVES TO SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT UNDER CEQA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Cultural Resources				
Archaeological resource	CP-2: The proposed project could cause a substantial adverse change in the significance of an archeological resource. (SM)	A-CP-2: Similar to the proposed project. (SM)	B-CP-2: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)
Paleontological resource	CP-3: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (SM)	A-CP-3: Similar to the proposed project. (SM)	B-CP-3: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)
Human Remains	CP-4: The proposed project could disturb any human remains, including those interred outside of formal cemeteries. (SM)	A-CP-4: Similar to the proposed project. (SM)	B-CP-4: Similar to the proposed project. (SM)	C-CP-1: Less than the proposed project. (NI)
Transportation and Circulation				
Construction conflict with plan	TR-6: Construction under the proposed project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (SM)	A-TR-6: Similar to but less than the proposed project. (SM)	B-TR-6: Similar to but less than the proposed project. (SM)	C-TR-6: Less than the proposed project. (NI)
Cumulative Traffic	CC-TR-1: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (SUM)	CC-A-TR-1: Similar to but less than the proposed project. (SUM)	CC-B-TR-1: Less than the proposed project. (NI)	CC-C-TR-1: Less than the proposed project. (NI)
Noise				
Noise standards	NO-1: The proposed project would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels. (SM)	A-NO-1: Similar to the proposed project. (SM)	B-NO-1: Similar to but less than the proposed project. (SM)	C-NO-1: Less than the proposed project. (LTS)

Legend

LTS Less-than-significant impact; no mitigation required

SM Less-than-significant impact, with mitigation

SU Significant unavoidable impact

SUM Significant unavoidable impact, with mitigation

NI No impact

TABLE S-4 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT UNDER CEQA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Air Quality				
Criteria Air Pollutant Impacts	AQ-1: Construction of the proposed project would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (SM)	A-AQ-1: Similar to but less than the proposed project. (SM)	B-AQ-1: Less than the proposed project. (SM)	C-AQ-1: Less than the proposed project. (NI)
Toxic Air Contaminants	AQ-3: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations. (SM)	A-AQ-3: Less than the proposed project. (SM)	B-AQ-3: Less than the proposed project. (SM)	C-AQ-3: Less than the proposed project. (NI)
Recreation				
Construction of Recreational Facilities	RE-2: The proposed project would include the construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment. (SM)	A-RE-2: Similar to the proposed project. (SM)	B-RE-2: Similar to the proposed project. (SM)	C-RE-2: Less than the proposed project. (NI)
Utilities and Service Systems				
Construction of Wastewater Facilities	UT-2: The proposed project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (SM)	A-UT-2: Similar to the proposed project. (SM)	B-UT-2: Similar to the proposed project. (SM)	C-UT-2: Less than the proposed project. (NI)
Construction of Stormwater Facilities	UT-3: The proposed project would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (SM)	A-UT-3: Similar to the proposed project. (SM)	B-UT-3: Similar to the proposed project. (SM)	C-UT-3: Less than the proposed project. (NI)
Biological Resources				
Candidate, sensitive, or special- status species	BI-1: The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (SM)	A-BI-1: Similar to the proposed project. (SM)	B-BI-1: Similar to the proposed project. (SM)	C-BI-1: Less than the proposed project. (NI)

Legend

LTS Less-than-significant impact; no mitigation required
SM Less-than-significant impact, with mitigation
SU Significant unavoidable impact

SUM Significant unavoidable impact, with mitigation
NI No impact

TABLE S-4 (Continued)
COMPARISON OF IMPACTS OF ALTERNATIVES TO SIGNIFICANT IMPACTS OF THE PROPOSED PROJECT UNDER CEQA

Impact Category	Proposed Project	Alternative A: Reduced Development / Density Alternative	Alternative B: One-for-One Replacement Alternative	Alternative C: No Action / No Project Alternative
Hazards and Hazardous Materials				
Transport, use, handling, or disposal of hazardous materials	HZ-1: The proposed project could create a significant hazard through routine transport, use, disposal, handling or emission of hazardous materials. (SM)	A-HZ-1: Similar to the proposed project. (SM)	B-HZ-1: Similar to the proposed project. (SM)	C-HZ-1: Less than the proposed project. (LTS)
Upset and accident conditions involving hazardous materials	HZ-2: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (SM)	A-HZ-2: Similar to the proposed project. (SM)	B-HZ-2: Similar to the proposed project. (SM)	C-HZ-2: Less than the proposed project. (LTS)

Legend

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SU Significant unavoidable impact

SUM Significant unavoidable impact, with mitigation
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CHAPTER 1

Purpose, Need, and Objectives

1.1 Introduction

This is a Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Sunnydale-Velasco HOPE SF Master Plan project (“proposed project”).¹ The San Francisco Planning Department, as lead agency responsible for administering the environmental review for projects in the City and County of San Francisco (City), has determined that an EIR is required based on the criteria of the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and Chapter 31 of the *San Francisco Administrative Code*. The City of San Francisco’s Mayor’s Office of Housing and Community Development (MOHCD), as lead agency under the National Environmental Policy Act (NEPA), has determined that the project requires the preparation of an Environmental Impact Statement (EIS) as a major federal action that may significantly affect the quality of the human environment.

The Draft EIR/EIS is intended to comply with both CEQA and NEPA, pursuant to Title 14, Division 6, Chapter 3 of the *California Code of Regulations* (CCR) (the State CEQA Guidelines), Section 15222 (“Preparation of Joint Documents”) and Title 40, Sections 1502.25, 1506.2, and 1506.4 of the *Code of Federal Regulations* (40 CFR 1502.25, 1506.2, 1506.4) (authority for combining federal and state environmental documents). This document analyzes the environmental impacts resulting from implementation of the proposed project.

The redevelopment of the Sunnydale and Velasco housing developments is part of the HOPE SF program, a public-private partnering effort to revitalize the City’s most distressed public housing sites.² In March 2007, the HOPE SF Task Force recommended that the City and the San Francisco Housing Authority (SFHA) partner to rebuild distressed public housing sites in San Francisco as mixed-income communities. HOPE SF principles include replacement of public housing units one-for-one, creation of economically integrated communities, involvement of residents with

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- ¹ NEPA documents generally refer to the action to be undertaken by the lead agency as “proposed action.” CEQA documents generally refer to the entirety of the project as the “proposed project.” The term “proposed project” is used throughout this document to refer to proposed redevelopment of the project site. The term “proposed action” is only used in reference to specific federal environmental regulations.
- ² HOPE VI is a \$5 billion program created in 1992 by the U.S. Department of Housing and Urban Development for revitalizing public housing. The purpose of the program is to replace severely distressed public housing projects with redesigned mixed-income housing and to provide housing vouchers so that some of the original residents can rent apartments in the private market. HOPE SF is modeled on HOPE VI but relies heavily on local funds and follows locally developed principles unique to HOPE SF. (“HOPE” stands for Housing Opportunities for People Everywhere.)

the planning process, provision of economic opportunities through the rebuilding process, integration with neighborhood improvements plans, and creation of environmentally sustainable and accessible communities.

1.1.1 Surrounding Neighborhood

The project site is located in the Visitacion Valley neighborhood of San Francisco (see **Figure 1-1**). The project site is adjacent to Gleneagles International Golf Course on the north. The golf course is a part of John McLaren Park, which occupies 317 acres and includes Herz Playground, Coffman Pool, and an assortment of playgrounds, athletic fields, tennis and basketball courts, as well as an outdoor amphitheatre, trails, open meadows, a lake, and a reservoir.³ Crocker Amazon Playground is to the west of the project site and includes play areas, athletic fields, tennis and basketball courts, a skateboard park, community garden, and recreation center.⁴ McLaren Park and Crocker Amazon Playground are zoned P (Public Use). The project site is adjacent to residential neighborhoods to the south and east. The surrounding neighborhood to the south and east is primarily zoned RH-1 (Residential House, one dwelling unit per lot), with one block (6320) zoned RH-2 (Residential House, two dwellings per lot) and several parcels zoned NC-1 (Neighborhood Commercial) to the east on Hahn Street.

Nearby Planning Efforts

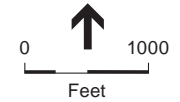
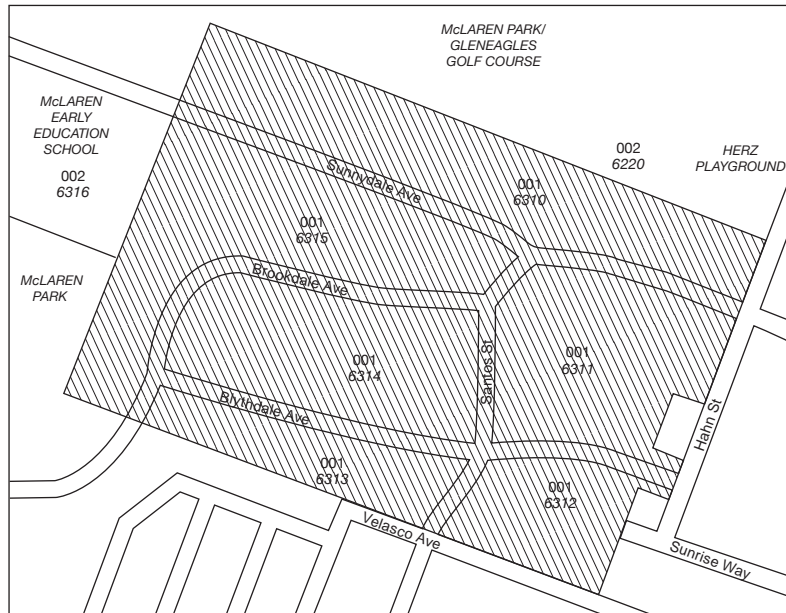
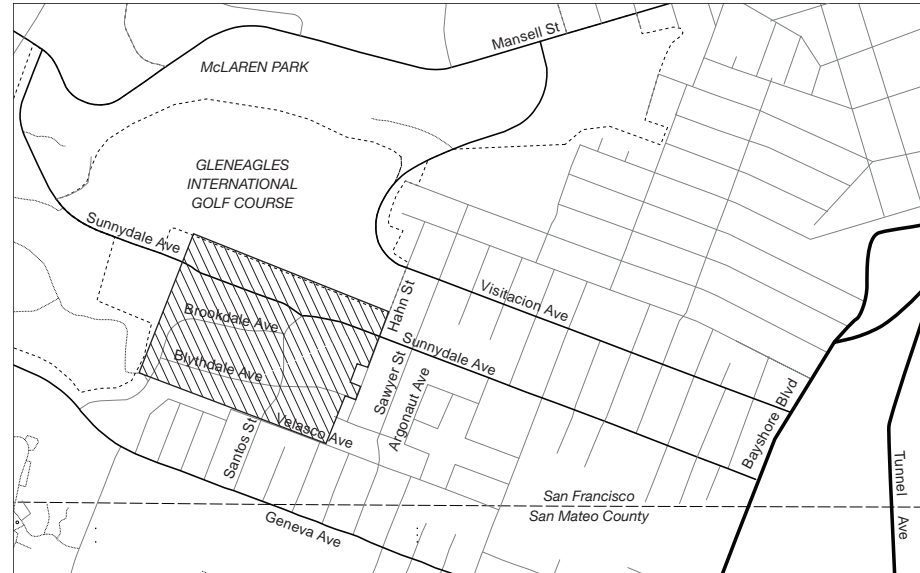
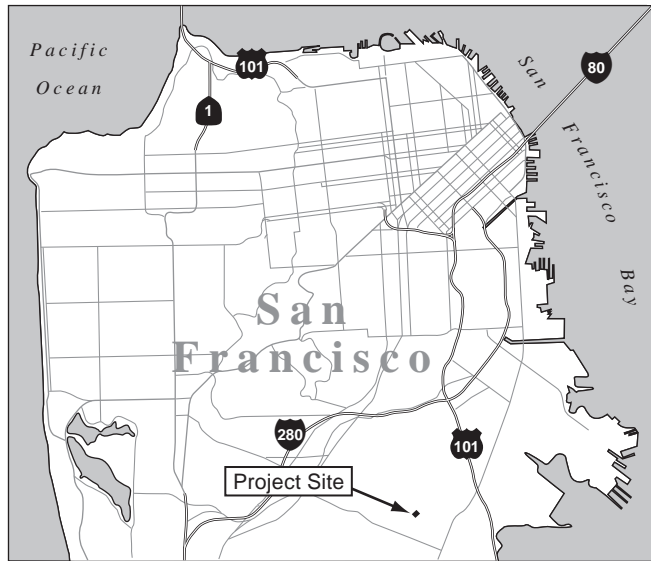
The more than 700-acre Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project, located about two miles to the east of the project site, is approved for a mix of residential and commercial uses.


The Visitacion Valley /Schlage Lock Special Use District includes 46 acres extending on both sides of Bayshore Boulevard roughly between Sunnysdale Avenue and Blanken Avenue in the center of the Visitacion Valley neighborhood approximately 1 mile to the east of the project site. This project includes the reuse of the vacant Schlage Lock property along the east side of Bayshore Boulevard and revitalization of the Leland Avenue commercial corridor. The program envisions a mix of residential and commercial uses in the project area. In spring 2014, the Planning Department and the Mayor's Office of Economic and Workforce Development, working with the community and the owner of the former Schlage Lock property, announced an agreement to move forward with reuse and redevelopment of the 20-acre Schlage site and other neighborhood improvements. This redevelopment will comprise 1,700 low- and middle-income apartments and condominiums, as well as parks, a community building, and grocery store. The redevelopment of the site was approved by the Planning Commission on June 5, 2014.⁵ On July 22, 2014, the Board

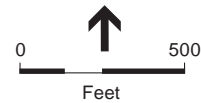
³ Welcome to McLaren Park. *Features of McLaren Park*, <http://www.jennalex.com/projects/fomp/homepage/index.html>, accessed July 18, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ San Francisco Neighborhood Parks Council. Crocker Amazon Park History, <http://www.sfnpc.org/crockeramazonpghistory>, accessed July 18, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ San Francisco Planning Commission, Meeting Minutes, available online: <http://www.sf-planning.org/index.aspx?page=3857>, June 5, 2014.



-  Project Site
- 001 Lot Number
- 6310 Assessor's Block



SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 1-1
Project Location

of Supervisors approved the project legislation, including an amended Special Use District, Design for Development document, a new Open Space and Streetscape Master Plan, and development agreement.⁶

The Executive Park Sub Area Plan Special Use District (SUD) is planned for the approximately 70-acre area between Candlestick Point and Highway 101 to the east of the project site. This new SUD would accommodate a transition from predominantly office use to mixed use/predominantly residential use with an overall goal to create a vibrant, urban, pedestrian oriented neighborhood characterized by publicly accessible streets.⁷ The Sub-Area Plan anticipates the build out of approximately 1,600 dwelling units, 84,000 gross square feet (gsf) of retail, and other ancillary uses.

The San Francisco Recreation and Park Department (SFRPD) has undertaken a planning process with the local community to envision a redesigned Mansell Street, Persia Street, and Brazil Street traversing the center of McLaren Park. A preferred design option, placing vehicles on one side of a median and pedestrian and bicycles on the other, was identified in 2013.

SFRPD is also currently completing a Significant Natural Resource Areas Management Plan (SNRAMP) for designated significant natural areas in the City and County of San Francisco. The purpose of the management plan is to establish a maintenance and preservation program related to the protection and enhancement of natural resource values. SNRAMP itself has not been finalized and adopted; however, the process of developing SNRAMP began in 1995, with the preparation of a staff report on the SNRAMP.⁸ A draft *Significant Natural Resources Areas Management Plan* was prepared in February 2006.⁹ McLaren Park, which is immediately adjacent to the project site, was included in that plan (see discussion in Section 3.16, Biological Resources). The plan includes a variety of recommendations for improvements in the park, such as restoration, enhancement, and maintenance work.

1.1.2 Project Site

The 48.8-acre project site is bounded by Hahn Street on the east, Velasco Avenue on the south, and McLaren Park to the north and west. It includes Assessor's Block 6310-Lot 1, Block 6311-Lot 1, Block 6312-Lot 1, Block 6313-Lot 1, Block 6314-Lot 1, and Block 6315-Lot 1.

The project site comprises two residential developments: the 767-unit Sunnydale housing complex and the 18-unit Velasco housing complex. These developments are owned and operated by SFHA.

⁶ San Francisco Board of Supervisors, Meeting Minutes, available online: <https://sfgov.legistar.com/View.ashx?M=M&ID=325580&GUID=60557F4A-1F16-4F29-9177-5C2C6CEDDA17>, July 22, 2014 (draft).

⁷ San Francisco Planning Department. Executive Park: *General Plan, Planning Code Text, and Map Amendments and Adoption of Design Guidelines—Executive Summary*, Case No. 2006.0422EMTUZ, April 21, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ The San Francisco Recreation and Park Commission adopted the staff report on January 19, 1995 by Resolution No. 9501-008.

⁹ San Francisco Recreation and Park Department, 2006. *Significant Natural Resource Areas Management Plan Final Draft*. February 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E, and on the internet at: <http://sfrecpark.org/parks-open-spaces/natural-areas-program/significant-natural-resource-areas-management-plan/snramp/>.

The 767 affordable family units of the Sunnydale complex were constructed in 1941 to house wartime ship builders.¹⁰ It comprises large blocks of two-story attached units in 91 buildings aligned perpendicularly to the streets in the development. Units comprise a mix of 71 one-bedroom, 531 two-bedroom, 150 three-bedroom, and 15 four-bedroom layouts.^{11,12}

The Velasco complex comprises 18 affordable senior units in two two-story buildings on the north side of Velasco Avenue. The buildings are connected to one-another via the roof system and exterior walkways. The 18 units comprise a mix of studio, one- and two-bedroom layouts. The development was completed in 1963 as an off-site component of the Hayes Valley Apartments project, which was built in the Hayes Valley neighborhood located more than 4 miles to the north of the project site.^{13,14}

Serving both developments, a 29,500-square-foot building provides daycare, youth programs and maintenance services. Two outdoor playgrounds and a full-size basketball court provide active recreation spaces on site. Four streets wind through the interior of the developments: Sunnydale Avenue, Blythedale Avenue, Brookdale Avenue, and Santos Street. These streets divide the project site into six blocks. The remainder of the areas around the buildings is unprogrammed open spaces and parking lots. The site provides 430 off-street parking spaces in 12 surface lots and 452 on-street parking spaces.

Existing community services at the site include the two Wu Yee child care centers, a Together United Recommitted Forever (TURF) youth program, a Health and Wellness Center, a Boys & Girls Clubhouse, and YMCA and VisValley Strong Families service connections for case management. Case managers help residents to obtain services they may need, such as employment, health, family services.

The site is within the RM-1 Residential, Mixed District, Low Density (one unit per 800 square feet of lot area is principally permitted), and 40-X height and bulk district (40-foot-high maximum height, no bulk limits). The site slopes down from west (Brookdale Avenue) to east (Hahn Street), at slopes ranging from 15.5 percent at its highest and steepest point to a 2-percent slope at the lower elevations. The average grade change is 9 percent. Elevations range from 250 feet at the western edge of the site to 75 feet at the southeastern corner. The topography allows for sweeping views to the south and to the east toward the San Francisco Bay.

¹⁰ Van Meter Williams Pollack, LLP, *A New Sunnydale: Existing Conditions Analysis*, prepared by Mercy Housing and Related Companies, September 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹¹ Carey & Co., Inc. *Historic Resource Evaluation: Sunnydale Housing Development, DRAFT*, May 25, 2001. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹² SFHA, Request for Qualifications to Redevelop Authority Property, Solicitation No. 08-610-RFQ-001, Site 7: Sunnydale, Exhibit E: Description of Existing Sites Available for Development, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹³ Carey & Co., Inc. *Velasco Housing Project, San Francisco, CA, Historic Resource Evaluation*, April 26, 2010.

¹⁴ SFHA, *Ibid.*, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

1.2 NEPA Purpose and Need

Under NEPA, the proposed action is the approval by the United States Department of Housing and Urban Development (HUD) of funding and development agreements associated with redevelopment of the project site with affordable housing. Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR Part 1502.13) state that the EIS purpose and need “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action.”¹⁵

1.2.1 Population and Employment Growth

San Francisco consistently ranks as one of the most expensive housing markets in the United States. San Francisco is a central city in an attractive region known for its agreeable climate, open space and recreational opportunities, cultural amenities, strong and diverse economy, and prominent educational institutions. As a regional employment center, San Francisco attracts people who want to live close to where they work. These factors continue to support strong housing demands in the City. New housing to relieve the market pressure created by the strong demand is particularly difficult to provide in San Francisco because the amount of land available is limited and because land and development costs are high. Approximately 345,811 households resided in San Francisco in 2010. By 2040, San Francisco is expected to add an additional 101,539 households, for a new total of 447,350, an increase of 29 percent.¹⁶ San Francisco’s employment is projected to grow from about 568,720 employees in 2010 to about 759,500 employees in 2040, an increase of 34 percent.¹⁷

There is a particular need for units affordable to very low-, low-, and moderate-income households, which is addressed by the City’s Inclusionary Affordable Housing Program in the *Planning Code*. The proposed project is subject to the provisions of *Planning Code* Section 415: Residential Inclusionary Housing Program, which requires projects of ten or more residential units to contribute to the creation of Below Market Rate (BMR) housing, either through direct development of BMR dwellings within the project equal to 12 percent of the project’s overall dwelling units, within a separate building within one mile of the project site (equal to 20 percent of the project’s overall dwellings), or through an in-lieu payment to the Mayor’s Office of Housing and Community Development.

1.2.2 Existing Housing Stock and Infrastructure Conditions

The existing housing stock at the Sunnydale-Velasco complexes is substantially deteriorated and does not comply with current building standards. For example:

- two-story units are heated by forced-air gas furnaces that only serve the ground floor;
- washing machine connections are available but dryer connections are not;

¹⁵ 40 CFR Part 1502.13

¹⁶ ABAG and MTC, Plan Bay Area, available online: <http://onebayarea.org/plan-bay-area/final-plan-bay-area.html>, adopted July 18, 2013.

¹⁷ ABAG, *Plan Bay Area: Projections 2013*, December 2013.

- some units have unfinished ceilings;
- boiler and boiler room equipment need replacement;
- the power wiring requires replacement;
- several units have asbestos tile and pipe installation, which present a safety hazard; and
- interior window bars lack breakaway hardware as a means of egress.¹⁸

SFHA has modernized units in response to evidence of peeling paint and plaster, water leaks, inoperable plumbing, mold, broken stairs and concrete areas, exposed wiring and plumbing, graffiti, trash and boarded up windows. In 2008, the rate of code violations for housing and habitability at Sunnydale was 10.5 per 1,000 people, which is far higher than the rate found in surrounding Visitacion Valley.^{19,20}

Site infrastructure is also deficient. Regarding surface infrastructure, the pathways and sidewalks are not all ADA-complaint: their widths are too narrow and slopes too steep. They do not contain handrails on steep slopes or drop-offs. Asphalt and concrete is deteriorated and broken. In addition, open space is not irrigated, and steep site slopes and neglected planting have caused erosion of non-paved areas. Sheet flow creates a safety hazard in building doorways.

Regarding subsurface infrastructure, the storm drainage system clogs, and portions of it have failed. Recurring sewer backups can be seen with sewage flow over onto the sidewalks. Water service for fire protection is not adequate for current code or site needs. Hot and cold water distribution lines are corroded and require replacement. In addition, sanitary lines and windows need to be replaced. A 2012 review by a licensed engineer determined that the housing developments require a major redesign, reconstruction or redevelopment to correct serious deficiencies, deferred maintenance, physical deterioration or obsolescence of major systems.^{21,22}

1.2.3 Urban Design, Open Space and Recreation

Sunnydale-Velasco is removed from the city and the rest of Visitacion Valley by topography, the unusual street pattern, and by its barracks-like building design and layout. The development is bordered on the north and west sides by Herz Playground and Gleneagles International Golf Course, both of which are in McLaren Park. A fence separates the park from the project site. The project site slopes from a high point at the western edge down toward Geneva Avenue and Hahn

¹⁸ SFHA, *Ibid.*, 2008.

¹⁹ San Francisco Department of Public Health (SFPDH), *Baseline Conditions Assessment of HOPE SF Redevelopment: Sunnydale, Public Review Draft*, Program on Health, Equity, and Sustainability, revised September 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²⁰ SFHA, *Ibid.*, 2008.

²¹ KPFF Consulting Engineers, Letter to Ms. Ramie Dare RE: Sunnydale Redevelopment: Existing Infrastructure Deficiencies, April 23, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²² HUD, Choice Neighborhoods – Certification of Severe Physical Distress, OMB Approval No. 2577-0269, HUD Form 53232, Sunnydale-Velasco, April 18, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Street, where there are limited street connections with the surrounding neighborhood. The site elevation drops 175 vertical feet across approximately 1,600 feet.²³

The existing buildings' orientation perpendicular to the developments' streets allows tenants to take advantage of the views that the topography provides, but the layout also creates ill-defined open spaces between each building. These open spaces are devoid of vegetation and ornamentation, other than grass and weeds.²⁴ The large blocks and curvilinear street plan were created to follow the natural contours of the land and reduce the amount of soil cut and fill, as well as to help prevent erosion and provide large amounts of open space.²⁵ This space, however, is undefined and unprogrammed.

According to analyses prepared by the San Francisco Department of Public Health, Sunnydale residents experience isolation and segregation from surrounding neighborhoods. Although there are some access points into the housing complex, the borders surrounding the complex are impermeable. Dead-end streets abut the neighborhood. Community members have described an environment in which residents of the surrounding Visitacion Valley community rarely venture into Sunnydale-Velasco, and vice-versa. The street design and building structures inhibit physical and social connectivity within the site and with neighbors. High traffic volumes and speeds on project streets pose safety hazards to pedestrians and bicyclists.²⁶

1.3 HOPE SF Guiding Principles

To guard the interests of public housing residents and community stakeholders in the rebuilding and revitalization of their communities, the HOPE SF Task Force created a list of principles to guide revitalization, such as one-for-one replacement of public housing units, job opportunities for residents, integration with neighborhood improvement plans, creation of environmentally sustainable housing, and building a strong sense of community. The guiding principles are as follows:

1. Ensure no loss of public housing,
2. Create an economically integrated community,
3. Maximize the creation of new affordable housing,
4. Involve residents in the highest levels of participation in entire project,
5. Provide economic opportunities through the rebuilding process,
6. Integrate process with neighborhood improvement revitalization plans,
7. Create environmentally sustainable and accessible communities, and
8. Build a strong sense of community.²⁷

²³ Van Meter Williams Pollack, 2009 *op cit*.

²⁴ Van Meter Williams Pollack, 2009 *op cit*.

²⁵ Carey & Co., Inc, 2001, *op. cit*.

²⁶ SFDPH, 2010, *op. cit*.

²⁷ HOPE SF: Guiding Principles, web page: <http://hope-sf.org/guiding-principles.php>, accessed September 5, 2014.

1.4 CEQA Project Objectives

Section 15124(b) of the State CEQA Guidelines requires that the project description contain a clear statement of the project objectives, including the underlying purpose of the project.

The project sponsor has identified the following project purpose and objectives:

- Create a racially, socially, and economically integrated neighborhood with new high-quality public housing units, affordable rental apartments, and market-rate for-sale homes;
- Ensure no loss of public housing units;
- Develop a financially feasible project;
- Establish physical and social connections between the Sunnydale-Velasco housing developments, the larger Visitacion Valley neighborhood, and the larger city;
- Provide economic opportunities for residents;
- Provide community facilities, including space for on-site services and programs;
- Create a comprehensive services plan to address gaps in services and facilitate access to existing programs and resources;
- Build new safe streets and open spaces;
- Create an environmentally sustainable and accessible community with access to healthy food and gardens;
- Develop different building types at a density to make the project economically viable;
- Build community-serving retail stores; and
- Incorporate green and healthy development principles that include green construction and healthy buildings, a walkable neighborhood, stormwater management, and solar technology.

1.5 Responsible Entities

1.5.1 Project Sponsor

The project sponsor is the Sunnydale Development Co., LLC. Sunnydale Development Co., LLC comprises co-developers Mercy Housing California and The Related Companies of California.

1.5.2 Lead Agencies

National Environmental Policy Act

The Mayor's Office of Housing and Community Development (MOHCD) has assumed responsibility for environmental review, decision-making, and action that would otherwise apply to the United States Department of Housing and Urban Development (HUD) under NEPA, and other provisions of the law that further the purposes of NEPA, as specified in 24 CFR 58.5.

This Draft EIR/EIS has been prepared in accordance with NEPA (42 USC §4321 et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR Parts 1500-1508) and HUD regulations for Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities (24 CFR Part 58).

The NEPA environmental review as required by federal agencies is a separate process from CEQA. One of the primary differences between NEPA and CEQA is the way significance is determined and discussed in environmental documents. Under CEQA, the lead agency is required to identify each significant effect on the environment resulting from the project, and ways to reduce or eliminate each significant effect. A significant environmental effect means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including but not limited to land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

Under NEPA, the determination of significance is based on context and intensity, and NEPA does not require that a determination of significant impacts be stated in the environmental documents. Impacts may be both beneficial and adverse, and a significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial. In addition, the scope of analysis under NEPA includes additional topics not covered under CEQA, such as Environmental Justice and Economic and Social Effects.

California Environmental Quality Act

CEQA requires the preparation of an EIR when a proposed project could result in significant, adverse effects on the physical environment. This EIR/EIS has been prepared in compliance with CEQA (*California Public Resources Code*, Sections 21000 et seq.), the *CEQA Guidelines*, and Chapter 31 of the *San Francisco Administrative Code*.

CEQA requires that before a decision can be made to approve a project that would result in potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The information contained in the EIR must be reviewed and considered by the City prior to a decision to approve, disapprove, or modify the proposed project. The state *CEQA Guidelines* (*California Code of Regulations*, Title 14, Division 6, Chapter 3, Section 15000 et seq.) help define the role and content of this EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform public agency decision-makers and the public of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (Section 15121[a]).
- **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make an informed decision that takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points

of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

The *CEQA Guidelines*, Section 15382, define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project... .” Therefore, in identifying the significant impacts of the project, this EIR/EIS concentrates on its substantial physical effects and upon mitigation measures to avoid, reduce, or otherwise alleviate those effects. This document is intended to comply with the requirements of CEQA.

1.5.3 Overview of the Joint NEPA-CEQA Processes

A Final EIR/EIS comprises a Draft EIR/EIS and the lead agency’s written responses to public and agency comments on the Draft EIR/EIS.

Scoping

HUD published a Notice of Intent (NOI) in the Federal Register, Vol. 77, No. 222 on November 16, 2012, to inform agencies and the general public that a Draft EIR/EIS would be prepared by the City and County of San Francisco, as the Responsible Entity in accordance with 24 CFR Part 58.2. The NOI also solicited comments concerning the Draft EIR/EIS. On December 13, 2012, MOHCD mailed a Change in Date of Close of Comment Period Notice to applicable agencies. This notice extended the comment period to January 18, 2013.

The San Francisco Planning Department published a Notice of Preparation (NOP) of an Environmental Impact Report / Environmental Impact Statement and Public Scoping Meetings on December 19, 2012, to inform agencies and the general public that the Draft EIR/EIS would be prepared based upon the criteria of the State CEQA Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance). This notice was sent to applicable agencies and organizations, tenants of the project site, and addresses within a 300-foot radius of the project site.

Pursuant to the *State of California Public Resources Code* Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, two public scoping meetings were held to receive oral comments concerning the scope of the EIR/EIS. The first meeting was held on January 5, 2013, at Visitacion Valley Branch Library at 201 Leland Avenue, San Francisco, CA. The second meeting was held on Saturday, January 12, 2013, at the Sunnydale Community Room, 1654 Sunnydale Avenue, San Francisco, CA. Attendees were given the opportunity to provide written and oral comments. A scoping report summarizing comments received was finalized in winter 2013 for this document below.

Draft EIR/EIS

The Notice of Availability of the Draft EIR/EIS is being distributed to interested agencies and individuals for a 60-day review and comment period. This distribution ensures that interested parties have an opportunity to express their views regarding the effects of the proposed action

and alternatives, and to ensure that information pertinent to permits and approvals is provided to decision makers.

Final EIR/EIS, Certification, and Record of Decision

Following public review of the Draft EIR/EIS, a Final EIR/EIS will be prepared. It will include responses to substantive comments on the Draft EIR/EIS and a discussion of any revisions made to the Draft EIR/EIS. The Final EIR/EIS will be available for public review for at least 10 days before the San Francisco Planning Commission considers the document for certification under CEQA. After an additional 30 days, MOHCD will decide on the action, if any, and publish a Record of Decision under NEPA.

Local Approvals and Request for Release of Funds

Upon certification of the EIR/EIS, the San Francisco Board of Supervisors, as well as specific city agencies, can consider the approvals listed in Section 1.5.2.

At the federal level, pursuant to 24 CFR Part 58 Subpart H, MOHCD will prepare and disseminate a Notice of Intent/Request for Release of Funds (NOI/RROF) prior to submitting the RROF and certification to HUD. After the dissemination of the NOI/RROF and HUD's receipt of the certification and RROF there is a 15-day objection period before HUD may approve the release of funds.

1.6 Uses of This Document

1.6.1 Report Organization

This joint EIR/EIS is divided into eight chapters, as follows:

- **Summary:** This chapter presents a summary of the following seven chapters, including synopses of the project purpose and need, explanation of a joint CEQA-NEPA document, descriptions of alternatives, summary of impacts and mitigation measures, and the environmental review process and public outreach.
- **Chapter 1: Purpose and Need for Project:** This chapter provides a description of the project setting and location, the purpose and need for the project, identifies the lead and responsible agencies, the project sponsor, and discusses the uses of this document.
- **Chapter 2: Project Alternatives/Project Description** describes the alternatives selection process and provides a detailed description of the four alternatives brought forward for analysis, including the proposed project, Reduced Development / Density Alternative, One-for-One Replacement Alternative, and No Action Alternative.
- **Chapter 3: Affected Environment:** This chapter describes the existing conditions within each impact category (Land Use, Visual Quality, Noise, Air Quality, etc.). The chapter is broken into sub-sections by impact category.

- **Chapter 4: Environmental Consequences** presents the analysis of environmental impacts, cumulative impacts, mitigation measures, and cited sources in footnotes as appropriate. The chapter is broken into sub-sections by impact category to correspond to the subsections in Chapter 3. Applicable plans, policies, and regulations are also discussed.
- **Chapter 5: Other CEQA/NEPA Considerations** covers other required topics under CEQA and NEPA not specifically addressed in Chapter 4, including Effects Found Not to Be Significant, Significant and Unavoidable Impacts, Growth Inducement, Irreversible and Irretrievable Commitments of Resources, Relationship Between Short-term Uses of the Environment and the Maintenance of Long-Term Productivity, identification of the Environmentally Superior Alternative, and Other Federal Laws and Executive Orders.
- **Chapter 6: Distribution List** includes a list of all parties that received notification of publication of this Draft EIR/EIS.
- **Chapter 7: List of Preparers** provides the names of applicable document preparers, as well as the contact information for the consultant team.
- **Chapter 8: Acronyms and Abbreviations** provides a list of the acronyms and abbreviations used in various sections and chapter of the Draft EIR/EIS.

1.6.2 Permits and Approvals Required

Federal

The project may request funds from the following programs administered by HUD:

- Community Development Block Grant (CDBG) funds under Title I of the Housing and Community Development Act of 1974;
- Home Investment Partnership Program (HOME) grants under Title II of the Cranston-Gonzales National Affordable Housing Act of 1990, as amended;
- CHOICE Neighborhoods Initiative Funds;
- Project Based Section 8 Vouchers under the United States Housing Act of 1937; and/or
- Section 8(o)(13) and Public Housing operating subsidies for mixed income developments authorized under the U.S. Housing Act of 1937, Section 35.

The Mayor's Office of Housing and Community Development would request funds under these programs through the RROF described in Section 1.4.3.

Local

The project sponsor would be required to obtain a recommendation from the San Francisco Planning Commission and approval from the Board of Supervisors for a rezoning that would create a Special Use District (SUD) to allow certain non-residential uses, such as community services, retail, and recreational and educational facilities that would otherwise not be permitted or require conditional use authorization. The SUD could also memorialize the ability to distribute the allowed density unevenly across the project site (i.e., certain blocks could develop at higher

densities than would be otherwise allowed as long as the density of the entire site is not exceeded) and enable modifications from the strict quantitative requirements of the *Planning Code* to allow for more flexibility in the placement of rear yards, setbacks, location and number of parking and loading spaces, among other standards. The rezoning would also include changes to the *Planning Code* height and bulk map for portions of the site to allow buildings up to 60 feet in height. The SUD may also proscribe the review process for development applications.

In addition, the proposed project would require the following approvals:

- The project sponsor may seek approval of a Development Agreement by the Board of Supervisors under Chapter 56 of the *Administrative Code*;
- The proposed new street grid would be subject to approval by the San Francisco Fire Department, San Francisco Department of Public Works (DPW), and the Sustainable Streets and San Francisco Municipal Railway (MUNI) Planning Divisions of the San Francisco Municipal Transportation Agency (SFMTA);
- The project would require approval of any necessary construction permits for work within roadways by SFMTA.
- The project would require a determination by the Planning Commission, in consultation with the Recreation and Park Commission, that any additional shadow cast on McLaren Park by new buildings exceeding 40 feet in height would not adversely impact the use of the park pursuant to Section 295 of the *Planning Code*.
- The project would require a *General Plan* Referral (Section 2A.53 of the *Administrative Code*) from the Planning Commission;
- The project would require building and demolition permits, which would require review and approval by the Planning Department and Department of Building Inspection (DBI); and
- The proposed site stormwater management system would require approval from the San Francisco Public Utilities Commission (SFPUC) to meet the Stormwater Design Guidelines.
- The project would require review and approval of a monitoring plan by SFPUC for construction activities near susceptible utilities.
- The project would require Erosion and Sediment Control Plan Approval by SFPUC in accordance with Article 4.1 of the *San Francisco Public Works Code* for construction activities.
- The project would require Batch Wastewater Discharge Permit Approval by SFPUC in accordance with Article 4.1 of the *San Francisco Public Works Code* for discharges of groundwater during dewatering.
- The project would require approval for new water, sewer, and street light utility connections by SFPUC.
- The project would require approval of any necessary construction permits for work within roadways by DPW.
- The proposed backup emergency generator would require a permit from the Bay Area Air Quality Management District (BAAQMD)

CHAPTER 2

Project Alternatives (EIS) / Project Description (EIR)

2.1 Introduction

The National Environmental Policy Act (NEPA) of 1969 (*U.S. Code* (USC) Title 42 Section 4321 et seq.) requires federal agencies considering certain actions that could affect the quality of the human or natural environment to “study, develop, and describe appropriate alternatives to recommended courses of action” for any proposal that includes “unresolved conflicts concerning alternative uses of available resources.”

The CEQA Guidelines, Section 15126.6(a), state that an EIR/EIS must describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project’s basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project. An EIR/EIS is not required to consider every conceivable alternative to a proposed project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

This chapter provides an overview of the range of alternatives considered for the Sunnydale-Velasco HOPE SF Master Plan. Included within this chapter is a discussion of the alternatives development process, detailed descriptions of the four alternatives selected for analysis (including the proposed project), and a brief explanation of those alternatives considered and dismissed from further review.¹

2.2 Screening Process

In accordance with NEPA, the EIR/EIS is only supposed to consider “reasonable” alternatives, which are defined in the NEPA regulations for all agencies (40 CFR 1500 et seq.) as those that are economically and technically feasible, and show common sense. Generally, the “common sense” phrase has been interpreted to mean the alternative meets the project objectives and purpose and need, and resolves the need for action. The Sunnydale-Velasco HOPE SF Master Plan alternatives development and refining process included discussions among the agencies, consideration of input by the public, and project sponsor input regarding feasibility.

¹ Although an EIR typically includes a separate chapter that analyzes alternatives following the analysis of the proposed project, NEPA requires that an EIS analyze alternatives at a similar level of detail as that of the proposed action. Hence, this chapter describes alternatives along with the proposed project.

NEPA Regulations (40 CFR 1502.14) require that an EIS:

- (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
- (c) Include reasonable alternatives not within the jurisdiction of the lead agency.
- (d) Include the alternative of no action.
- (e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
- (f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

Under CEQA Guidelines Section 15126.6(d), alternatives may be analyzed at a lesser level of detail than the proposed project. However, 40 CFR 1502.14(b), above, is generally interpreted to mean that NEPA requires that alternatives be analyzed at a similar level of detail as that of the proposed project. Accordingly, this chapter describes the proposed project and the alternatives to the project that are analyzed in this EIR/EIS at a similar level of detail.

CEQA Guidelines Section 15126.6(f)(1) states that the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). The EIR/EIS must evaluate the comparative merits of the alternatives and include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. Specifically, the CEQA Guidelines set forth the following criteria for selecting and evaluating alternatives:

- [T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (Section 15126.6[b])
- The range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. (Section 15126.6[c])
- The specific alternative of "no project" shall also be evaluated along with its impact. (Section 15126.6[e][1])

- The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR/EIS need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making. (Section 15126.6[f])

In accordance with CEQA, an alternative selected for analysis must meet the following three criteria: (1) the alternative would attain *most* of a project's basic objectives; (2) the alternative would *avoid or substantially lessen* the significant environmental impacts of the proposed project; and (3) the alternative would be *feasible*. The EIR/EIS need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote or speculative. Furthermore, the EIR/EIS need not consider every conceivable alternative, but must consider a reasonable range of alternatives that will foster informed decision-making and public participation.

The alternatives selection process for the proposed project was guided, in part, by the magnitude and severity of the impacts identified, with particular focus on feasible strategies that could lessen or avoid significant and unavoidable impacts. In addition, potential alternatives were identified through the project planning process as well as through review of scoping comments received following issuance of the Notice of Preparation and Notice of Intent. In some cases, an alternative concept or strategy was eliminated from further consideration based on either its inability to attain most of the project's basic objectives or its infeasibility of implementation. These rejected alternatives are briefly discussed in Section 2.4 for informational purposes. The alternatives identification and selection process resulted in the final alternatives that were determined to represent a reasonable range of alternatives, which are described and analyzed in this EIR/EIS.

2.3 Alternatives

The project sponsor organized a community planning process to develop the Sunnydale-Velasco HOPE-SF Master Plan. Between November 2008 and May 2011, a total of 19 meetings and workshops were held at the project site and the surrounding community to develop the Master Plan.² Concurrent with the Master Planning process, the sponsor's Community Building Team interviewed neighborhood community-based organizations and performed door-to-door interviews of each of the project site's households to learn from residents the types of programs, services, and activities that would best meet their needs.

2.3.1 Proposed Project

Under the proposed project, the project sponsor proposes to demolish the existing buildings, including all 785 family and senior dwelling units, at the Sunnydale and Velasco public housing complexes, and build replacement and new housing, new infrastructure, open space and community amenities. Highlights of the plan include:

² Sunnydale Development Co., LLC, Choice Neighborhoods Planning Grants, Attachment 8: Resident Involvement Certification, April 26, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

- Up to 1,700 units of housing, including one-for-one public housing replacement units, subsidized by SFHA but under management by and the ownership of the developers or related entities, affordable rental units, and market rate and affordable for-sale units;³
- Up to 72,500 square feet of community service, recreational and educational facilities;
- 11.5 acres of new parks and private open spaces, including a community garden, a farmer's market pavilion and secure outdoor courtyards within residential buildings;
- 12.2 acres of a new and reconfigured street network potentially including "green" features including bioswales and landscaping; and
- Approximately 16,000 square feet of neighborhood-serving retail.
- The project sponsor intends to construct the project to LEED® (Leadership in Energy Efficient Design) ND (Neighborhood Development) standards.

Figures 2-1 through 2-4 illustrate the proposed project plan. The project sponsor proposes to demolish and replace the existing 94 two-story residential buildings within the Sunnydale and Velasco public housing development with approximately 34 new two- to five-story development blocks.

The completed project would occupy approximately 2,843,000 gross square feet of floor area for a net increase of approximately 2,048,500 gross square feet. The height of the new buildings would range from 40 to 60 feet above ground level, with 18 buildings at 40 feet or less in height and 15 buildings at 50 feet in height, and one development block at 60 feet in height. Thirty-three of the buildings would contain family dwelling units; the single building at 60 feet in height would include senior housing and would have some retail and community services on the ground floor. The buildings would be a mix of the following:

- Townhouse/Rowhouse—Attached, multistory, single-family homes;
- Stacked Flats—One-story apartments arranged one over the other;
- Podium Building—A building with a parking garage below and residences or other uses above;
- Corridor Building—An apartment building with units accessed from a central corridor;
- Mixed Use—Retail or public use on ground floor with senior housing above; and
- Up to 72,500 square feet of community-serving space in several locations, including a separate two-story community center, which would house recreational facilities for use by project residents and residents of the neighborhood, with youth and early childhood education programs. In addition, the project would also include a replacement San Francisco Police Department substation.

³ The total number of public housing units would be replaced on a one-for-one basis. However, the mix of one-, two-, three-, and four-bedroom units would be slightly modified to better accommodate anticipated demand.



SOURCE: Van Meter Williams Pollack

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 2-1
Proposed Project -
Building Type Plan



SOURCE: Van Meter Williams Pollack

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

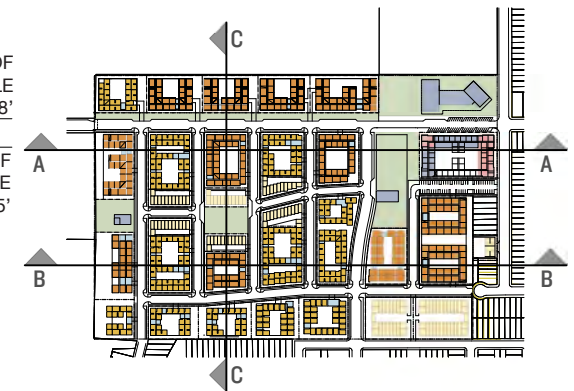
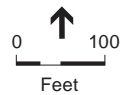
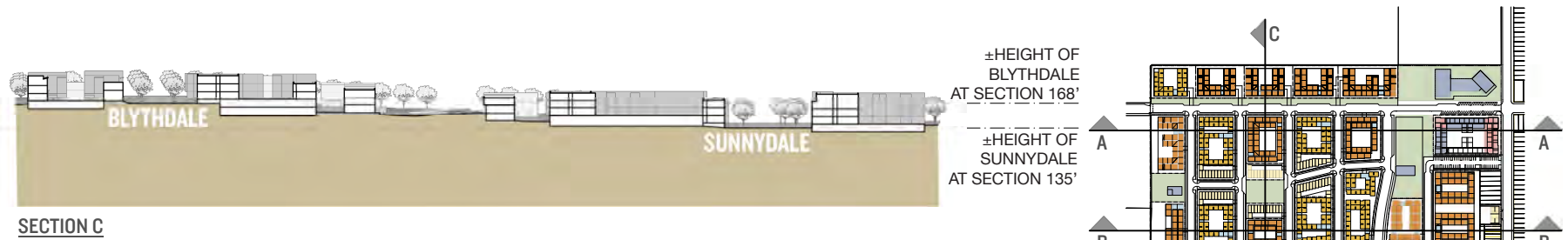
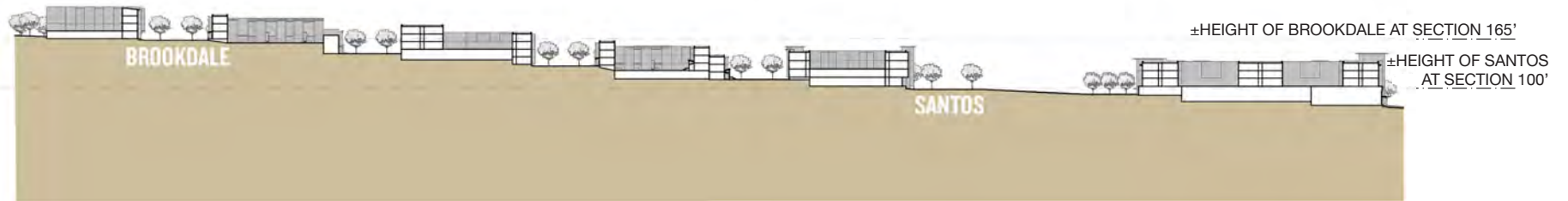
Figure 2-2
Proposed Project -
Height Diagram



SOURCE: Van Meter Williams Pollack

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 2-3
Proposed Project -
New and Reconfigured Streets and Preliminary Parcel Map



The approximate unit mix and sizes of residential units are shown in **Table 2-1**.

TABLE 2-1
APPROXIMATE UNIT MIX AND SQUARE FOOTAGES: PROPOSED PROJECT

Type	Count	Square Feet per Unit
One Bedroom	581	600
Two Bedroom	796	850
Three Bedroom	311	1,110
Four Bedroom	12	1,300

Some buildings would have a combination of foundations with spread footings that are approximately 3-to-5 feet (0.9-to-1.5 meters) deep, and drilled piers that could be 20-to-30 feet (6-to-9 meters) deep. In some situations, where the slopes are steeper on the western side of the site, deeper foundations may be needed with excavation, plus drilled piers to about 45 feet (13.5 meters).

The project would also involve installation of one diesel-powered emergency generator, located in a building to be used for senior housing and retail mixed-use, at the northeast corner of the project site. The emergency generator would meet the federal interim Tier 3 diesel engine standards for particulate matter for diesel engines with a rating between 75 and 750 horsepower.

The project sponsor proposes realigning Sunnydale, Brookdale and Blythedale Avenues and Santos Street and adding new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street. Brookdale Avenue would be realigned to connect with Sunnydale Avenue; new cross streets ("B", "C", and "D" Streets) would connect Blythedale Avenue to Sunnydale Avenue at three different locations; Blythedale Avenue would be realigned at Hahn Street to connect with Sunrise Way; and a pair of new streets ("A" Street and Center Street) would link Blythedale Avenue and Hahn Street one block north of Sunrise Way. Center Street would also link Santos Street to "C" Street and "D" Street to Brookdale Avenue, although there would be no vehicular access between "C" and "D" Streets in the area that would contain Mid-Terrace Park (see Figure 2-3). The existing traffic calming elements at the intersection of Sunnydale Avenue and Santos Street would be removed as part of the street reconfiguration.

The new grid pattern would have corner bulb-outs (extension of a corner sidewalk at an intersection), mid-block bulb-outs (extension of sidewalk in midblock into parking lane to reduce speeding), and stop-signs at all intersections. See **Figure 2-5**, which shows the travel lane widths for proposed streets in the project site. The proposed project would stripe 5-foot bike lanes on westbound Sunnydale Avenue west of Santos Street, and in both directions on Santos Street between Sunnydale Avenue and Velasco Avenue. It would also provide sharrows⁴ along the

⁴ A sharrow is a street symbol that combines arrows and a bicycle and that indicates the path of travel for bicycles where no separate bicycle lane is provided.



SOURCE: CHS Consulting Group

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 2-5
Existing and Proposed Bicycle Routes and Cross Sections

remaining portions of Sunnydale Avenue the east side of Santos Street, stenciled on the approximately 14.5-foot-wide roadway pavement. It would provide sharrows along Brookdale and Blythedale Avenues stenciled on the approximately 11-foot-wide wide roadway pavement.

The widths of sidewalks would range between 5 to 15 feet depending on the location. The eastern portion of Sunnydale Avenue near the community center would have the widest sidewalk at 15 feet in width, and sidewalks along the new north-south streets (i.e., "A", "B", "C", and "D" Streets would be narrowest at 5 feet wide. All streets are proposed as public streets and would be maintained by the City.

The project site currently contains 430 off-street surface parking spaces (0.55 spaces per dwelling unit) and 452 on-street parking spaces. The proposed project would provide approximately 1,437 off-street parking spaces (0.85 spaces per dwelling unit) in underground and at-grade parking garages in mixed-use and residential buildings, and 525 on-street parking spaces. As shown in Figure 2-1, the proposed street layout would include perpendicular parking on Center Street between "A" Street and Hahn Street. Parallel parking would be provided on the rest of the streets in the project site. The perpendicular parking lanes on Center Street would be up to 16.5 feet from the curb, and the parallel parking lanes would be 7 feet from the curb. One off-street loading space would be provided at the senior housing and retail building. On-street loading spaces would be allocated throughout the project site. The proposed 5-foot-wide bike lanes on the north side of Sunnydale Avenue and on both sides of Santos Street would run parallel to these parking lanes.

The proposed project would increase the number of dwelling units on the site from 785 to approximately 1,700, an increase of 915 dwelling units. The proposed project would increase the number of dwelling units for low-income households from 785 to 1,006, with the balance of dwelling units targeted to market rate households. In total, approximately 60 percent of the proposed project would be affordable housing while the remaining 40 percent would be set aside as market-rate housing.

The proposed project would be constructed in three phases. The site is approximately 92 percent occupied, with the balance of units vacant.⁵ Current residents would be moved to available (vacant) residences on the project site as each phase is constructed. However, not all tenants may be relocated on site.

Pursuant to Section 104(d) of the Housing and Community Development Act of 1974 and in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended), the project sponsor will prepare a Relocation Assistance Plan (RAP), or Equivalent Plan, that will comply with the requirements of RAP-equivalent documents and applicable regulations. The RAP will describe criteria for financial assistance for replacement housing, and reimbursement criteria for moving costs and/or different housing costs (including

⁵ Mercy Housing California, personal communication with Environmental Science Associates, August 9, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

rents). Residents in good standing (lease compliant) who are unable to relocate on site would be given housing vouchers by the Housing Authority for relocation elsewhere during the construction period. The new dwellings would be populated as each phase is completed. Existing residents in good standing who had moved off-site during construction would be given the first opportunity to return.

Every resident residing in a public housing dwelling unit and in good standing at the start of their relocation phase and during their relocation phase would have the right to return to the project site. Returning residents would be provided a preference for occupancy prior to other eligible households. This preference would be retained even if the resident has received permanent relocation benefits.

Table 2-2 is a summary of existing and proposed development.

**TABLE 2-2
EXISTING CONDITIONS AND PROPOSED PROJECT**

	Existing Uses (to be demolished)	Proposed Project (approximate)
Residential	765,000 square feet	2,185,000 square feet
Retail	0	16,000 square feet
Parking	Surface	570,000 square feet structured
Other	29,500 square feet of daycare youth programs and maintenance	72,500 square feet of recreation building, pavilion, and community services
Total Gross Square Footage (GSF)	794,500 GSF	2,843,500 GSF
Dwelling units	785	1,700
Parking spaces	430 off-street 452 on-street	1,437 off-street 525 on-street
Number of buildings	94	34 development blocks
Height of buildings	20-35 feet	40-60 feet
Number of stories	2	2-4

The proposed project would include a stormwater management system that would meet the City's Stormwater Management Ordinance requirements. The proposed project would collect, detain and potentially retain some stormwater within the project site such that the rate and amount of stormwater run off from the site does not negatively affect the capacity of the City's treatment facilities. The following features could be included: seasonal waterways and rain gardens (planted depressions that allow rainwater runoff from walkways, parking lots, and roofs, to be absorbed into the ground); bioswales for stormwater retention in the public right of way where grades allow and on private lots; porous concrete pavements used in sidewalks and parking areas of the public right-of-way where grades allow; flexible space for community gatherings and performances; space for a farmer's market; community growing gardens; residential courtyards; playgrounds; and community parks. The project sponsor anticipates that the proposed project would be built to LEED® ND standards and would be designed to include energy saving and sustainability features.

At project buildout, the project site would be configured as shown in **Table 2-3**:

**TABLE 2-3
PROPOSED PROJECT ACREAGES**

Use	No. of Acres
New and Configured Streets	12.2
Residential and Community Facilities Development Sites	30.0
New Public Parks (not including private courtyards)	5.6
Sunnydale Avenue Linear Open Space	1.0
Total Site Area	48.8

As discussed above, the proposed project would be constructed in three phases. It is estimated that each phase of construction would last between three to 9 years for a total of 9 to 15 years in duration for the entire project. Construction activity could occur from 7:00 a.m. to 6:00 p.m. However, the project sponsor has confirmed that the days with the extended construction activity would represent a relatively small percentage of the total construction period, such that the majority of construction would occur between the hours of 7:00 a.m. and 3:00 p.m.⁶

The details of the construction plan have not yet been finalized, but it is planned that the project would be constructed in phases delineated in Figure 2-2. The first phase (Phase I) would demolish 316 existing dwelling units and construct 521 new units and the community support services in the eastern portion of the project site (i.e., Blocks 1 through 9). Eastern portions of Sunnydale Avenue and Blythedale Avenue, and Santos Street would be reconfigured during this first phase, and new "A" Street and the portion of Center Street connecting "A" Street to Hahn Street would be constructed. Phase II would continue the reconfiguration of Sunnydale Avenue west and introduce the northern portions of the new north-south streets, "B," "C," and "D" Streets, and the remainder of Center Street. During this phase, 279 existing dwelling units would be demolished and 625 new units would be developed in the northwestern portion of the project site (i.e., Blocks 10 through 21). Phase III would connect the new north-south streets to Blythedale Avenue. During this phase, 191 existing dwelling units would be demolished and 554 new dwelling units would be constructed in the southwest portion of the project site (i.e., Blocks 22 through 36).

During each phase, the existing buildings, streets, and utilities would be demolished first, and rough grading of the streets, building pads and open space would occur. During each phase's grading period, all vegetation would be removed and a shallow layer of soil would be removed over much of the site. At other locations, new soil would be added. The project would require about 221,000 cubic yards of soil to be hauled off the site. Maximum excavation would be 45 feet (13.5 meters) below the current ground surface. Up to 10 daily truck trips would occur.⁷

⁶ ENVIRON International Corporation, *Air Quality and Health Risk Assessment: Sunnydale Velasco HOPE Project, San Francisco, California*, Appendix B-3, June 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁷ *Ibid.*

The construction of new underground utility infrastructure with appropriate tie-ins to existing utilities (e.g., neighborhood power transformers, and sanitary sewer boxes) would follow, and then buildings would be constructed as determined by the financing available as well as the best scenarios for facilitating equipment and material access to the building sites. Trees would be replaced on a one-for-one basis, at a minimum.⁸

Objectives

The proposed project is specifically proposed to meet the CEQA Project Objective and address the NEPA Purpose and Need described in Chapter 1. The project would help to address the City's low-income and market-rate housing needs, and replace the existing deteriorated housing stock and site infrastructure with new buildings and infrastructure meeting current standards. Moreover, it would enhance neighborhood integration, ensure no loss of public housing units, and provide connections, economic opportunities, and community facilities for residents. The project would be built with new streets and open spaces to create connections between the site and neighboring developments. The project would meet green and healthy development goals.

Project Variant

The project sponsor is considering a variant to the proposed project that would have a different number of units set aside for market rate housing than the number of such units proposed under the project. This variant also proposes a different mix of one-, two-, and three-bedroom market-rate dwelling units, with 62 fewer units than the proposed project, but would maintain the same building envelope (i.e., same number of buildings in the same size and configuration). **Table 2-4** shows the breakdown of units for the proposed project and the project variant. Other portions of the project, including the community space and police substation, would be the same under the variant as they would under the proposed project.

**TABLE 2-4
PROPOSED PROJECT AND PROJECT VARIANT**

Dwelling Units	Proposed Project	Project Variant
Market Rate Ownership 2 or more bedrooms	309	492
Market Rate Ownership 1 bedroom/studio	385	140
Affordable Rental 2 or more bedrooms	772	772
Affordable Rental 1 bedroom/studio	84	84
Affordable Senior Housing	150	150
Total Units	1,700	1,638
Net New Units	915	853

⁸ Sunnydale Development Co., LLC, Initial Environmental Evaluation Application, Attachment to Tree Disclosure Statement, April 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

This variant is being identified and analyzed to provide flexibility for the development of the project site.

2.3.2 Alternative A: Reduced Development / Density Alternative

Under the Reduced Development / Density Alternative (Alternative A), the existing 94 two-story residential buildings at the project site would be demolished. Up to 1,372 units of housing would be constructed in 34 new development blocks. There would be 852 affordable units. This total would include public housing replacement units subsidized by SFHA but under management by and the ownership of the developers or related entities. It would also include 67 affordable rental units. The alternative would also provide 520 market-rate for-sale units. **Figure 2-6** illustrates the Reduced Development / Density Alternative site plan.

The alternative would occupy approximately 2,010,000 gross square feet of floor area for a net increase of 1,215,000 square feet. The total number of new residential units would be as shown in **Table 2-5**. The height of the new buildings would range from 40 to 60 feet above ground level. Similar to the proposed project, the single development block at 60 feet in height would contain senior housing and would have some retail and community services on the ground floor. The buildings would be a mix of Townhouse/Rowhouse, Stacked Flats, Podium Buildings, Corridor Buildings, and Mixed Use.

**TABLE 2-5
APPROXIMATE UNIT MIX AND SQUARE FOOTAGES:
REDUCED DEVELOPMENT / DENSITY ALTERNATIVE**

Type	Count	Square Feet per Unit
One Bedroom	390	600
Two Bedroom	690	850
Three Bedroom	290	1,110
Four Bedroom	2	1,300

Similar to the proposed project, the Reduced Development / Density Alternative would include up to 72,500 square feet of community service, recreational and educational facilities. It would also include a replacement police substation. The community center, community building, and pavilion would be located in the same locations under this alternative as under the proposed project. It would also include approximately 16,000 square feet of neighborhood-serving retail, and it would be constructed to meet LEED® (Leadership in Energy Efficient Design) ND (Neighborhood Development) standards. The alternative would also include a new backup generator for the senior housing building.

The proposed project would comprise the approximate unit mix and sizes shown in Table 2-5. A comparison of the characteristics of this alternative and the proposed project is shown in **Table 2-6**.



**TABLE 2-6
PROPOSED PROJECT AND REDUCED DEVELOPMENT / DENSITY ALTERNATIVE**

	Proposed Project (approximate)	Reduced Development / Density Alternative (approximate)
Residential	2,185,000 square feet	1,383,000 square feet
Retail	16,000 square feet	16,000 square feet
Parking	570,000 square feet structured	388,090 square feet structured
Other	72,500 square feet of recreation building, pavilion, and community services	72,500 square feet of recreation building, pavilion, and community services
Total Gross Square Footage (GSF)	2,843,500 GSF	2,010,000 GSF
Dwelling units	1,700	1,372
Parking spaces	1,437 off-street 525 on-street	1,123 off-street 481 on-street
Number of development blocks	34 development blocks	34 development blocks
Height of buildings	40-60 feet	40-60 feet
Number of stories	2-4	2-4

The alternative would include 5.6 acres of new parks and open spaces. As under the proposed project, under the alternative these open spaces and parks would include a community garden, a farmer's market pavilion and secure outdoor courtyards within residential buildings.

The site plan would be similar to that of the proposed project. Sunnydale, Brookdale and Blythedale Avenues and Santos Street would be realigned in the same locations as those of the proposed project. New cross streets would be constructed between Brookdale Avenue and Sunnydale Avenue; and a pair of new streets would link Blythedale Avenue and Hahn Street one block north of Sunrise Way. The alternative would provide approximately 1,123 off-street parking spaces (0.82 spaces per dwelling unit) in underground and at-grade parking garages in mixed-use and residential buildings, and 481 on-street parking spaces. It would also provide 654 bike parking spaces. Sidewalk widths, bicycle lanes, and traffic-calming features would be the same as described for the proposed project.

Like the proposed project, the Reduced Development / Density Alternative would include a stormwater management system that would meet the City's Stormwater Management Ordinance requirements.

As under the proposed project, the Reduced Development / Density Alternative would be built in three phases, beginning in the northeastern portion of the site and moving in a counterclockwise direction, over approximately the same 9- to 15-year duration. As under the proposed project, the project sponsor would prepare an implement a RAP. Current residents would be moved to available residences on the project site as each phase is constructed, or they would be given housing vouchers by the Housing Authority for relocation elsewhere during the construction period. The new dwellings would be populated as each phase is completed.

Objectives

The alternative would meet the CEQA Project Objective and address the NEPA Purpose and Need described in Chapter 1, although not to the same degree as the proposed project. The alternative's new residential units would address the City's low-income and market-rate housing needs, although with fewer new units than the proposed project, the alternative would not address the need to the same degree as would the proposed project. The alternative would replace the existing deteriorated housing stock and site infrastructure with new buildings and infrastructure meeting current standards. Moreover, it would enhance neighborhood integration, ensure no loss of public housing units, and provide connections, economic opportunities, and community facilities for residents. The alternative would comprise a green development that would include new streets and open spaces, and the range and number of building types would make the alternative economically viable, although fewer units would not provide as much financial flexibility to meet economic goals.

2.3.3 Alternative B: One-for-One Replacement Alternative

Under this alternative (Alternative B), the existing 94 two-story residential buildings at the Sunnydale and Velasco public housing complexes would be replaced. The new buildings would be designed to accommodate the 785 family and senior dwelling units that are present under existing conditions. These 785 public housing replacement units would remain affordable housing, subsidized by SFHA but under management by and the ownership of the developers or related entities. The building designs would be similar to those under existing conditions, but they would be updated to meet current *San Francisco Planning Code* and *Building Code* requirements. Alternative B would include replacements for existing community facility and police substation uses. It would not include any new generators.

The site plan for the complexes and the existing street grid would remain generally the same as they are under existing conditions, although some grading and building pad adjustments would be undertaken. The alternative would add one new cross street at the top of the project connecting Sunnydale Avenue to Brookdale Avenue. This would allow for the closure of portions of Sunnydale without having to shut down the bus service through the project site, at any time. Existing streets would retain their current connections to the surrounding Visitacion Valley street network. The alternative would provide bicycle lanes on westbound Sunnydale Avenue west of Santos Street and along both sides of Santos Street. Pending coordination and approval with SFMTA, sharrows would be installed on Sunnydale Avenue east of Santos Street. The sponsor would also coordinate with SFMTA to determine potential locations for installation of corner and mid-block bulb-outs.

The project site's existing 430 off-street surface parking spaces and 452 on-street parking spaces would be replaced in approximately their current configurations. The alternative would provide bicycle parking spaces, the number of which would be determined through the Special Use District legislation. Bike parking would also be provided for the community center use. The existing public open space at the project site—including existing recreational facilities—would be

replaced. The community center and child care uses would be located in the same locations as under existing conditions.

The One-for-One Replacement Alternative would require infrastructure upgrades. The existing sanitary and storm sewer piping would be retained in place in the upper (western) portion of the site, but would require replacement on the eastern portion of the site. Parking lots, sidewalks, and other surface facilities would meet requirements of the Americans with Disabilities Act. Given that the majority of the site would retain its existing layout, excavation would be minimal compared to the proposed project and the Reduced Development / Density Alternative.

The alternative would be built in three phases, beginning with the northeastern portion of the site and moving counter clockwise. Construction of each phase would take 24 months. As under the proposed project, the project sponsor would prepare and implement a RAP. Current residents would be moved to available residences on the project site as each phase is constructed, or they would be given housing vouchers by the Housing Authority for relocation elsewhere during the construction period. Streets within the project site would be closed temporarily by phase. The new dwellings would be populated as each phase is completed.

This alternative would not require an SUD. Its uses, density, height, and bulk would be within the controls set by the existing RM-1 and 40-X height and bulk district. It would, however, require the other approvals listed in Chapter 1.

Objectives

The alternative would only partially meet the CEQA Project Objective and partially address the NEPA Purpose and Need described in Chapter 1. The alternative would replace all existing affordable, deteriorated housing units and site infrastructure with new buildings and infrastructure meeting current standards. However, it would not increase the amount of housing on the site. The alternative would not enhance neighborhood integration, given the same physical layout would be present as under existing conditions, and the site would not be a mixed-income community. The alternative would comprise a green development. The alternative would not include market-rate units, and as such would rely on solely on subsidy.

2.3.4 Alternative C: No Action / No Project Alternative

As required by 24 CFR 1502.14(d), an EIS is required to analyze a No Action Alternative. Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities (24 CFR 58.40(e)) require the Mayor's Office of Housing and Community Development (MOHCD) to examine a No Action Alternative. Similarly, according to *CEQA Guidelines* Section 15126.6(e), the No Project Alternative must be evaluated along with its impacts to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving it. The No Action / No Project Alternative (hereinafter referred to as the No Action Alternative or Alternative C) represents what would be reasonably expected to occur in the foreseeable future if the project were not approved.

Under the No Action Alternative, the existing Sunnydale and Velasco Housing complexes would not be improved. The existing 94 buildings and 785 units would remain in their current conditions, including ongoing maintenance as feasible, given Housing Authority funding constraints. All roadways within and through the project site would retain their current configuration, and no new community buildings, parks, open spaces, or other buildings or infrastructure would be built or renovated. The site would continue to be operated by SFHA, and existing tenants would not be temporarily relocated within the site because there would be no new construction.

Given the current condition of the complex and age of the buildings, SFHA would continue to undertake routine maintenance of existing buildings, pending funding availability. Existing units, however, would not be fully rehabilitated or otherwise replaced in-kind.

This alternative would not address the NEPA Purpose and Need or meet CEQA Project Objectives described in Chapter 1.

2.4 Alternatives Considered but Rejected from Further Analysis

During the formulation of the Master Plan, the project sponsor and MOHCD explored alternative site layout and building unit compositions beyond those discussed in Section 2.3. The following two alternatives were analyzed during the Master Planning process but rejected from further consideration in the NEPA and CEQA processes.

2.4.1 Wrapped Parking Alternative

Under the Wrapped Parking Alternative, the street, open space, community building, and block layout would be similar to those of the proposed project and Reduced Development / Density Alternative. A total of 1,264 units would be constructed. Off-street parking would be concentrated in the center of the project site in two 192-space garages, which would be wrapped by affordable housing residential units. The project would include 904 affordable units and 360 residential units. All 785 existing affordable units would be replaced under this alternative. Market-rate buildings would be built along the perimeter blocks of the site, and affordable housing would be concentrated in the interior blocks.

The motivation to explore this alternative was to simplify the design and reduce the construction cost by removing the parking from most blocks and locating it in just two blocks. This option was rejected from analysis in the EIR/EIS because the sponsor determined that it could not finance the two garages, and therefore the alternative would not meet the project sponsor's objective of being feasible. In addition, the unit count dropped substantially when compared to the proposed project, further reducing the financial feasibility of the project.

2.4.2 Surface-Parking Only Alternative

In the Surface-Parking Only Alternative, the street layout and site plan would be similar to those of the proposed project and Reduced Development / Density Alternative. A total of 1,091 units would be built, of which 61 percent (664 units) would be affordable and 39 percent (427 units) would be market-rate. Market-rate units would be built along Sunnydale and Blythedale Avenues and Santos Street. All off-street parking spaces would be built in surface parking lots in the new interior blocks within the project site.

This alternative was explored in an attempt to remove the parking from underneath the units and provide only surface parking to reduce the hard costs of the project. This alternative was rejected from further consideration because the resulting unit count is too low. To achieve the desired unit count to make the project feasible, buildings would have to be substantially taller than nearby developments, and these buildings would be isolated by the surrounding parking lots. This development program would not integrate the neighborhood, would not create a walkable neighborhood, and could jeopardize the project's ability to attract funding. The development program would not meet the project sponsor's objective of ensuring no loss of public housing units, and it would not be financially feasible.

CHAPTER 3

Affected Environment

3.1 Introduction

This chapter presents the existing physical environmental setting of project site. Each subsection presents a description of the existing physical environmental conditions in the project area with respect to each resource topic at an appropriate level of detail to allow the reader to understand the impact analysis in Chapter 4.

Subsections include each environmental factor required by CEQA, the CEQA Guidelines, and Chapter 31 of the *San Francisco Administrative Code*. Additional factors are provided pursuant to NEPA Environmental Impact Statement content that is required by Council on Environmental Quality Regulations (40 CFR 1502.15), as well as United State Department of Housing and Urban Development environmental review requirements (24 CFR 58.36). The existing physical setting for the following environmental topics is provided in this chapter:

- Plans and Policies
- Land Use
- Visual Quality / Aesthetics
- Socioeconomics / Population and Housing
- Environmental Justice
- Cultural and Paleontological Resources
- Transportation and Circulation
- Noise
- Air Quality
- Greenhouse Gas Emissions
- Wind and Shadow
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Mineral and Energy Resources
- Agriculture and Forestry Resources

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3.2 Plans and Policies

In accordance with CEQA Guidelines Section 15125(d), this section provides a summary of the plans and policies relevant to the proposed project. This section analyzes whether the proposed project, or its alternatives, would conflict with applicable plans and policies. Policy conflicts do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA, in that the intent of CEQA is to determine physical effects associated with a project. Many of the plans of the City and County of San Francisco and the other relevant government agencies contain policies that address multiple goals pertaining to different resource areas. If physical environmental impacts of a proposed project may result from conflicts with one of the goals related to a specific resource topic, such impacts are analyzed in this EIR-EIS in that respective topical section, such as Section 4.09, Noise, Section 4.10, Air Quality, and Section 4.08, Transportation and Circulation.

3.2.1 Bay Area Air Quality Management District's Plans

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the *2010 Bay Area Clean Air Plan (Clean Air Plan)*. In September 2010, the BAAQMD adopted the *Clean Air Plan*, which updates the *Bay Area 2005 Ozone Strategy*. The 2010 Clean Air Plan requires implementation of "all feasible measures" to reduce ozone; provides a control strategy to reduce ozone, particulate matter, toxic air contaminants, and greenhouse gases in a single, integrated plan; reviews progress in improving air quality in recent years; and establishes emission control measures to be adopted or implemented. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others; and land use, energy, and climate control measures to be implemented primarily through state and local government regulations.

The *2010 Clean Air Plan* and physical impacts of the Sunnydale-Velasco HOPE SF Master Plan project relating to attainment of air quality standards are addressed in Sections 3.10 and 4.10, Air Quality.

3.2.2 San Francisco General Plan

The *San Francisco General Plan* provides general policies and objectives to guide land use decisions and contains some policies that relate to environmental issues. The *General Plan* contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the city. The compatibility of the project with *General Plan* policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the proposed project. If physical environmental impacts may result from such conflicts, these impacts are analyzed under the relevant environmental topic in Chapter 4. A full *General Plan*

analysis will accompany any decision and to approve the project as proposed, and the decision makers will need to find that the Project is, on balance, consistent with the *General Plan*.

Housing Element

The Housing Element sets forth objectives, policies, and programs to address the housing needs of all economic segments of the community of the City of San Francisco. It is intended to provide the policy background for housing programs and decisions, as well as provide direction towards meeting the City's housing goals. One of the objectives of the Housing Element applicable to the proposed project is the adequate provision of housing for the full range of housing needs in the City. The Housing Element policies with which the proposed project may conflict are listed below.

Policy 11.3: Ensure growth is accommodated without substantially and adversely impacting existing residential neighborhood character.

Policy 11.4: Continue to utilize zoning districts which conform to a generalized residential land use and density plan and the *General Plan*.

Policy 11.5: Ensure densities in established residential areas promote compatibility with prevailing neighborhood character.

The proposed project would increase the density of development, thereby changing the project site's land use character. The existing low-density development would be redeveloped, and streets would be realigned, to result in a more intensive, urban residential character. As described in the Project Description, the existing zoning for the project site would be modified through legislation of a Special Use District. The project's physical environmental effects on land use character are discussed in Sections 3.3 and 4.3.

Urban Design Element

The Urban Design Element explains the City's policies toward the physical character of the City. Objectives of the Urban Design Element that are applicable to the proposed project include reinforcement of the street pattern as related to topography; promotion of connections between districts; and moderation of major new development to complement the City pattern. The Urban Design Element policies with which the proposed project may conflict are listed below.

Policy 1.1: Recognize and protect major views in the city, with particular attention to those of open space and water.

Policy 2.4: Preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Objective 3: Moderation of major new development to complement the city pattern, the resources to be conserved, and the neighborhood environment.

Policy 3.2: Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance.

Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.

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 would result in a more dense development than under existing conditions. Roadways would be realigned and straightened, and existing open space areas and buildings would be redeveloped. The project would result in a change in orientation and views, and new buildings would represent a departure from the existing architectural styles of the project site and surrounding neighborhoods. The new buildings would be generally taller than those nearby. The project's physical environmental effects on aesthetics are analyzed in Sections 3.4 and 4.4.

3.2.3 San Francisco Planning Code

The *Planning Code* incorporates, by reference, the City's Zoning Maps and governs permitted uses, densities and the configuration, height and bulk of buildings, among other aspects, in San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless the proposed project conforms to the *Planning Code*, an exception is granted pursuant to provisions of the *Planning Code*, or a reclassification (rezoning) of the site occurs. The project sponsor has requested a Special Use District (SUD) overlay to the current RM-1 use district and amendment of the Zoning Map to alter the existing 40-X height and bulk district zoning. The SUD would permit less than 100,000 square feet of neighborhood-serving retail and community uses for certain buildings and enable densities to be transferred across blocks. Further, the project sponsor has proposed establishing a Design Standards and Guidelines document that would more specifically detail development requirements and guidelines for internal streets, open spaces, and buildings. In conjunction with the SUD, other zoning map amendments would enable buildings taller than 40 feet.

The *Planning Code* describes the underlying RM-1 zone in *Planning Code* Section 206.2 as containing a mixture of single-family and multi-family homes, including apartment buildings, that broaden the range of unit sizes and the variety of structures. The density of buildings is low; buildings are moderate in scale and segmented with separate entrances. Building heights rarely exceed 40 feet. Outdoor space is available at ground and upper levels. Nonresidential uses are permitted to provide for the needs of residents. The *Planning Code* does not require publicly accessible open space (i.e., parks) in conjunction with new residential development.

Regarding height and bulk, the existing 40-X Height and Bulk district limits buildings to 40 feet tall, with no bulk controls. The amendment of the Zoning Map (rezoning) would provide for taller buildings in key locations on the proposed project site.

The proposed project would provide on-site publicly accessible open space in the form of 5.6 acres of new park spaces, a community garden and farmer's market pavilion. The project also proposed to improve access and better integrate Herz Playground, which exists immediately north of the project site. The RM-1 zoning requires 100 square feet of open space per unit if all open space is

private, or 133 square feet if shared. In light of the proposed addition of new parks (not required by the Planning Code) as part of the project, the proposed SUD would reduce the on-site usable open space requirement. The proposed project would provide a total of approximately 283,140 square feet of new open space for 1,700 dwelling units (167 square feet per unit), but this open space would be within the new park spaces, as opposed to private or common areas within buildings. The proposed SUD would resolve the open space requirements for the project site.

The *Planning Code* includes a requirement for new developments to pay an Affordable Housing Fee, or to set aside 12 percent of the units on site for affordable housing. The proposed project would exceed this requirement by setting aside 32 percent (295 units) of the added 915 units as affordable housing. In total, 60 percent of the dwelling units in the proposed project would be affordable housing. The Variant would set aside 35 percent (295 units) of its added 853 units as affordable housing.

The project also includes senior housing with retail space and a community center that includes office and program space for community services. *Planning Code* Section 151 requires one off-street parking space per dwelling unit, with no required off-street spaces for affordable housing projects and senior housing; therefore, the parking requirement for the proposed program would be 694 residential spaces. Retail, recreation, community center and office space larger than 5,000 square feet require one off-street space per 500 square feet of occupied floor area for a total of 177 short-term and long-term non-residential parking spaces. The proposed project would provide a total of about 1,437 off-street parking spaces and 525 on-street parking spaces. The overall off-street parking ratio would be 0.85 spaces per unit. Including on-street parking, the ratio would be 1.18 spaces per unit. The project would meet the requirements set forth under the *Planning Code* for parking within an RM-1 zone.

Priority Policies

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to *Planning Code* to establish eight Priority Policies. These policies, and the sections of this Environmental Evaluation addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (Section 4.3, Land Use and Land use Planning); (3) preservation and enhancement of affordable housing (Section 4.5, Socioeconomics/Population and Housing, with regard to housing supply and displacement issues); (4) discouragement of commuter automobiles (Section 4.8, Transportation and Circulation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Section 4.3, Land Use and Land use Planning); (6) maximization of earthquake preparedness (Section 4.17, Geology and Soils); (7) landmark and historic building preservation (Section 4.7, Cultural and Paleontological Resources); and (8) protection of open space (Section 4.12, Wind and Shadow, and Section 4.13, Recreation).

Prior to issuing a permit for any project which requires an Initial Study under the 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 consistency of the proposed project with the environmental topics associated with the Priority Policies is discussed in Chapter 4. This EIR/EIS will provide information for use in the case report for the proposed project. 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.

3.2.4 San Francisco Sustainability Plan and Climate Action Plan

In 1993, the San Francisco Board of Supervisors established the Commission on San Francisco's Environment, charged with, among other things, drafting and implementing a plan for San Francisco's long-term environmental sustainability. The goal of the *San Francisco Sustainability Plan* is to enable the City and its people to meet their present needs without sacrificing the ability of future generations to meet their own needs.

The *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions* is a local action plan that examines the causes of global climate change and human activities that contribute to global warming, provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets, and describes recommended actions for reducing the City and County's greenhouse gas emissions.

The Sunnydale-Velasco HOPE SF Master Plan project is reviewed against the City's Greenhouse Gas Reduction Strategy in Section 4.11, Greenhouse Gas Emissions. As explained there, this strategy documents the City's actions to pursue cleaner energy, energy conservation, alternative transportation and solid waste policies. Adherence to the strategy would ensure that the project would not conflict with the sustainability plan or climate action plan.

3.2.5 San Francisco Green Building Program

San Francisco Green Building Code

The San Francisco *Building Code* was amended in 2008 to add Chapter 13C, Green Building Requirements. The new requirements under this ordinance mandate that newly constructed private residential and commercial buildings include energy- and water-efficiency features during construction and operation. The stated purpose of the chapter is "to promote the health, safety and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the City and County of San Francisco's building stock and by providing a healthy indoor environment." The California Building Standards Commission recently adopted a green building code as part of the *California Building Code* (Title 24 of the *California Code of Regulations*, part 6). Local jurisdictions are allowed to adopt or continue to use their own green building ordinances as long as they are as, or more, stringent than those adopted by the state.

The San Francisco Green Building Requirements establish either Leadership in Energy and Environmental Design (LEED®) certification levels or GreenPoint Rated systems points for types of residential and commercial buildings.

The project sponsor anticipates that the proposed project would be built to LEED® ND standards and would be designed to include energy saving and sustainability features.

3.2.6 Other Plans and Policies

The recently adopted Plan Bay Area, which includes the region's Sustainable Communities Strategy, is a collaboration of the following four principal regional planning agencies and their policy documents that guide planning in the nine-county Bay Area:

- Association of Bay Area Governments (ABAG), *Projections*, which includes long-term forecasts of population, housing, and employment for the nine-county Bay Area, but does not include policies or goals; thus the proposed project would not be inconsistent with ABAG projections. See also the discussion on Population and Housing in Sections 3.5 and 4.5.
- BAAQMD *2010 Clean Air Plan* (2010 CAP), which is a road map that demonstrates how the San Francisco Bay Area will reduce emissions and decrease ambient concentration of harmful pollutants, achieve compliance with the state ozone standards, and reduce the transport of ozone and ozone precursors to neighboring air basins. As described in Section 4.10, Air Quality, the proposed project would not conflict with the 2010 CAP.
- Metropolitan Transportation Commission (MTC), *Regional Transportation Plan – Transportation 2040*, which provides a long-range road map to guide the Bay Area's MTC transportation investments for a 25-year period. The project would not conflict with the Regional Transportation Plan.
- San Francisco Bay Conservation and Development Commission (BCDC) *San Francisco Bay Plan*, which provides direction for BCDC's permit authority regarding various activities within its jurisdiction. The proposed project is not located within BCDC's jurisdiction and therefore would not conflict with the Bay Plan.

The proposed project would not be inconsistent with these above plans, or with Plan Bay Area overall, which promotes inter-related goals of improving air quality, developing sufficient housing, building efficient and climate-friendly transportation infrastructure, and restoring the health of the bay.

In addition, the RWQCB *San Francisco Basin Plan* guides planning of the San Francisco Bay Basin. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs to achieve water quality objectives. As described further in Section 4.18, Hydrology and Water Quality, the proposed project would not result in substantial water quality effects; thus the project would not conflict with the Basin Plan.

3.3 Land Use and Land Use Planning

This section discusses the existing land uses for the project site and vicinity.

3.3.1 Project Site and Vicinity

Land Uses on the Project Site

The project site comprises two residential developments: the 767-unit Sunnydale housing complex and the 18-unit Velasco housing complex over 48.8 acres (approximately 16 units per acre). These developments are owned and operated by SFHA.

The 767 units of the Sunnydale complex were constructed in 1941 to house wartime ship builders.¹ The development comprises large blocks of two-story attached units in 91 buildings aligned perpendicularly to the streets in the development. Units comprise a mix of 71 one-bedroom, 531 two-bedroom, 150 three-bedroom, and 15 four-bedroom layouts.^{2,3}

The Velasco complex comprises 18 units in two two-story buildings on the north side of Velasco Avenue. The buildings are connected to one-another via the roof system and exterior walkways. The 18 units comprise a mix of studio, one- and two-bedroom layouts. The development was completed in 1963 as an off-site component of the Hayes Valley Apartments project, which was built in the Hayes Valley neighborhood located more than 4 miles north of the project site.^{4,5}

Serving both developments, a two-story, approximately 29,500-square-foot building provides daycare, youth programs and maintenance services. Two outdoor playgrounds and a full-size basketball court provide active recreation spaces on site. Four streets wind through the interior of the developments: Sunnydale Avenue, Blythedale Avenue, Brookdale Avenue, and Santos Street. These streets divide the project site into six blocks. The remainder of the areas around the buildings is unprogrammed open spaces and parking lots. The site provides 450 spaces of off-street parking in 12 surface lots and 432 spaces of on-street parking.

¹ Van Meter Williams Pollack, LLP, *A New Sunnydale: Existing Conditions Analysis*, Draft, prepared by Mercy Housing and Related Companies, April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Carey & Co., Inc. *Historic Resource Evaluation: Sunnydale Housing Development*, DRAFT, May 25, 2001. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ SFHA, Request for Qualifications to Redevelop Authority Property, Solicitation No. 08-610-RFQ-001, Site 7: Sunnydale, Exhibit E: Description of Existing Sites Available for Development, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ Carey & Co., Inc. *Velasco Housing Project, San Francisco, CA, Historic Resource Evaluation*, April 26, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ SFHA, *Ibid.*, 2008.

The project site slopes from a high point at the western edge down towards Geneva Avenue and Hahn Street. The change in topography is 175 vertical feet and provides for broad views to the south and of the Bay to the east. The elevation ranges from 250 feet at the western edge of the site to 75 feet at the southeast corner, sloping down towards the Bay. The high point of the site is at the base of John McLaren Park, which rises to 520 feet north of the project site. The site is currently zoned RM-1 (Residential Mixed, Low Density) and is within a 40-X height and bulk district.

Land Uses Surrounding the Project Site

Sunnydale-Velasco is removed from the city and the rest of Visitacion Valley by topography, the unusual street pattern, and by its barracks-like building design and layout.

The project site is adjacent to Gleneagles International Golf Course and Herz Playground (and Coffman Pool) to the north. The golf course and playground are a part of John McLaren Park, which occupies 317 acres and includes an assortment of playgrounds, athletic fields, tennis and basketball courts, as well as an outdoor amphitheater, trails, open meadows, a lake and a reservoir.⁶ However, there is a fence separating the site from John McLaren Park, so site residents must traverse either Sunnydale Avenue to the west or Hahn Street to the east to access these facilities.

Directly west of the project site is the San Francisco Unified School District's John McLaren Early Education Center, which provides preschool services and after-school activities and education. Crocker Amazon Playground is farther to the west of the project site and includes play areas, as well as athletic fields, tennis and basketball courts, a skateboard park, community garden and recreation center.⁷ Other neighborhood parks include the Kelloch/Velasco Park, which is three blocks east of the project site, and Visitacion Valley Playground, which is located adjacent to Visitacion Valley Elementary School six blocks east of the project site.

The project site is adjacent to residential neighborhoods to the south and east, where there are limited street connections. These areas comprise a mix of predominantly two-story, attached single-family houses and apartment buildings. Leland Avenue—eight blocks northeast of the project site—serves as the neighborhood's primary commercial corridor. Commercial services are also present on Sunnydale Avenue, east of the project site, as well as along Geneva Avenue in Daly City, southeast of the project site.

The surrounding neighborhood to the south and east is mostly zoned RH-1 (Residential House, one dwelling unit per lot), with one block (6320) zoned RH-2 (Residential House, two dwellings per lot) and a couple of blocks zoned NC-1 (Neighborhood Commercial) to the east on Hahn Street. McLaren Park, to the north and west of the project site, is zoned P (Public Use).

⁶ Welcome to McLaren Park. *Features of McLaren Park*, <http://www.jennalex.com/projects/fomp/homepage/index.html>, accessed 18 July 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁷ San Francisco Neighborhood Parks Council. Crocker Amazon Park History, <http://www.sfnpc.org/crockeramazonpghistory>, accessed 18 July 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Neighborhood Planning Context

The Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project, located about 2 miles to the east of the project site, is approved for a mix of residential and commercial uses.

The Visitacion Valley/Schlage Lock SUD includes 46 acres extending on both sides of Bayshore Boulevard roughly between Sunnydale Avenue and Blanken Avenue in the center of the Visitacion Valley neighborhood approximately 1 mile to the east of the project site. This project includes the reuse of the vacant Schlage Lock property along the east side of Bayshore Boulevard and revitalization of the Leland Avenue commercial corridor. The program envisions a mix of residential and commercial uses in the project area. As of spring 2014, the Planning Department and the Mayor's Office of Economic and Workforce Development, working with the community and the owner of the former Schlage Lock property, announced an agreement to move forward with reuse and redevelopment of the 20-acre Schlage site and other neighborhood improvements. This redevelopment will comprise 1,700 low- and middle-income apartments and condominiums, as well as parks, a community building, and grocery store. The redevelopment was approved by the Planning Commission on June 5, 2014.⁸ On July 22, 2014, the Board of Supervisors approved the project legislation, including an amended SUD, Design for Development document, a new Open Space and Streetscape Master Plan, and development agreement.⁹ The Executive Park Special Use District (SUD) is planned for the approximately 70-acre area between Candlestick Point and Highway 101 to the east of the project site. This new SUD would accommodate a transition from predominantly office use to mixed use/predominantly residential use with an overall goal to create a vibrant, urban, pedestrian oriented neighborhood characterized by publicly accessible streets.

The San Francisco Recreation and Park Department (SFRPD) has undertaken a planning process with the local community to envision a redesigned Mansell Street, Persia Street, and Brazil Street traversing the center of McLaren Park. A preferred design option, placing vehicles on one side of a median and pedestrians and bicycles on the other, was identified in 2013. Project funding is currently being identified.

⁸ San Francisco Planning Commission, Meeting Minutes, available online: <http://www.sf-planning.org/index.aspx?page=3857>, June 5, 2014.

⁹ San Francisco Board of Supervisors, Meeting Minutes, available online: <https://sfgov.legistar.com/View.ashx?M=M&ID=325580&GUID=60557F4A-1F16-4F29-9177-5C2C6CEDDA17>, July 22, 2014 (draft).

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3.4 Visual Quality/Aesthetics

This section describes the visual character and aesthetics of the affected environment within and surrounding the project site. The visual character and aesthetics of an area are created by elements of the natural and built environment and their physical relationship to each, as perceived by people. Natural and built elements of the affected environment are integral to the land use environment. Therefore, the setting discussions below incorporate much of the information presented in **Section 3.3**, Land Use and Land Use Planning.

3.4.1 Existing Conditions

Regional Visual Setting

The project site is located about 5 miles south of downtown San Francisco and about 6 miles north of the San Francisco International Airport. It is roughly 3 miles east of San Francisco Bay. The project site is in the Visitacion Valley area of San Francisco close to the Daly City border. It is located approximately 3 miles east of Interstate 280 (I-280) and approximately 1.5 miles west of U.S. Highway 101 (US-101). The visual character of the vicinity is that of a built-out urban area. Generally, the City has a rectilinear street grid, and buildings are constructed to the lot line. Some areas immediately south of the City, including within the City of Brisbane to the southeast, are vacant, although they were previously developed with rail and industrial uses.

Local Visual Setting

Visitacion Valley is a topographic depression roughly defined by McLaren Park and Gleneagles Golf Course to the west, Mansell Boulevard to the north, Bayview Hill and Candlestick Cove to the east, and the San Francisco/San Mateo County line to the south. The valley depression extends southward into Daly City/Brisbane Baylands, just south of the city border. Bayview Park, a high point to the east beyond U.S. Highway 101, looks west at sweeping views of Visitacion Valley, with the San Miguel Hills and San Bruno Mountain in the background.

Visitacion Valley exhibits visual character that is varied, reflecting the characteristics of its natural and built elements, including topography, street grids, roads, and individual buildings and blocks. As typical of other San Francisco residential neighborhoods, the majority of the area is comprised of small lots, with buildings built with minimal setbacks from the sidewalk, and generally two story in height within the residential portions of the area, with some taller buildings on the arterials; the area buildings feature a variety of architectural styles. Visitacion Valley has two arterials: Bayshore Boulevard, a six-lane street that travels north-south on the eastern border, and Geneva Avenue, a four-lane street that travels east-west on the southern border of the area. In the vicinity of the project site (several blocks in all directions), blocks tend to be longer in the north-south direction than in the east-west direction.

Some features that set Visitacion Valley apart visually from other neighborhoods include variations in topography and large swaths of land set aside as open space. As discussed in Section 3.3, Land Use and Land Use Planning, the project site is adjacent to Gleneagles

International Golf Course and Herz Playground on the north, which are part of the 317-acre John McLaren Park, and is in close proximity to Crocker Amazon Playground to the west. Other neighborhood parks include the Kelloch/Velasco Park, which is three blocks east of the project site, and Visitacion Valley Playground, which is located adjacent to Visitacion Valley Elementary School six blocks east of the project site. These open spaces, which make up substantial portions of Visitacion Valley, enhance the visual quality of the neighborhood and make it more inviting to pedestrians and bicyclists. Another dominant visual feature in Visitacion Valley is the Cow Palace, an indoor arena, and its various associated facilities (surface parking areas, etc.). The Cow Palace, which is much larger than most structures in the area, is located one block south of the project site (across the Daly City border) and dominates many views of and through the project vicinity.

The project site is adjacent to residential neighborhoods to the south and east. These areas comprise a mix of predominantly two-story (20-35 feet tall), attached single-family houses and apartment buildings. Leland Avenue—eight blocks northeast of the project site—serves as the neighborhood’s primary commercial corridor. Commercial services are also present on Sunnydale Avenue, east of the project site, as well as along Geneva Avenue in the City of Daly City, southeast of the project site. The residential and commercial areas are pedestrian-oriented and contain features typical of such areas but do not exhibit any unique or exceptional visual characteristics or resources.

Project Site Visual Setting

Topography

The project site slopes from a high point at the western edge down towards Geneva Avenue and Hahn Street. The change in topography, at 175 vertical feet, is moderately steep and provides for broad views to the south and of the Bay to the east. The elevation ranges from 250 feet at the western edge of the site to 75 feet at the southeast corner, sloping down towards the Bay. The high point of the site is at the base of John McLaren Park, which rises to 520 feet north of the project site. The building footprints are generally aligned with the natural topography and oriented according to slope.

Development Pattern

The pattern of development on the project site departs radically from the typical block and lot pattern seen throughout much of the City, including the Visitacion Valley neighborhood. The project site comprises two residential developments: the 767-unit Sunnydale housing complex and the 18-unit Velasco housing complex. The 767 units of the Sunnydale complex exist in large blocks of two-story attached units in 91 buildings aligned perpendicularly to the streets in the development. The Velasco complex comprises 18 units in two two-story buildings on the north side of Velasco Avenue. The buildings are connected to one-another via the roof system and exterior walkways.

The project site also contains two outdoor playgrounds and a full-size basketball court. Four streets wind through the interior of the developments: Sunnydale Avenue, Blythedale Avenue, Brookdale Avenue, and Santos Street. These streets divide the project site into six blocks. The remainder of the areas around the buildings is unprogrammed open spaces and parking lots.

The buildings are constructed in rows and are generally parallel to each other within each row (e.g., across the rows). However, the rows are off-set from each other, resulting in some buildings sited perpendicular to the street, while others meeting the street at various angles. While this arrangement appears to be random, the buildings actually follow the natural contours of the hillsides. Each structure is rectangular in plan, utilizing a reinforced poured-in-place concrete construction, and featuring a hipped tile roof. The buildings are painted in alternating beige, light blue, and terra cotta colors. The facades are simple with minimal architectural articulation and no balconies. Many doorways feature flat concrete awning projections above and some windows, particularly on the ground level, feature metal security bars. The buildings are connected by concrete walkways, stairs and open space.

Vegetation and Lighting

Vegetation throughout the project site is inconsistent and largely unmaintained. Grass, dirt, shrubs and trees of various species and sizes make up large portions of the project site between the buildings. The trees and shrubs are planted irregularly, some lining the streets and others scattered throughout the site's interior. Evenly spaced street lighting is present along Sunnydale Avenue, Blythedale Avenue, Brookdale Avenue, and Santos Street, but minimal lighting is provided in the interior of the blocks (between the housing units and along the concrete walkways).

Visual Character

The project site does not contain any notable buildings or any structures considered visual or scenic resources for the purposes of CEQA. Moreover, the project site is not considered to be a visual landmark. While the variations in topography, abundance of open space between the buildings, and the open campus-like layout of the site would otherwise enhance its visual quality, these features are negated by the poor physical condition of the buildings and the surrounding features (landscaping, walkways, roads, etc.) and by the absence of any unique or distinctive architectural elements. While the site layout is rare within the context of San Francisco (as the building layout departs from the typical development pattern seen throughout the city), in and of itself the project site is not visually distinctive. The regularity and similarity of the existing barrack-like structures does not rise to the level of being visually remarkable or especially attractive.

Site Visibility and Existing Views

As noted above, the project site is located within a valley, which limits its visibility from vantage points throughout much of the city and its surroundings. The site is, however, visible from the elevated areas that frame the valley, some of which are park and other types of public areas (roads, etc.). A series of photographs taken from locations within and around the project site is

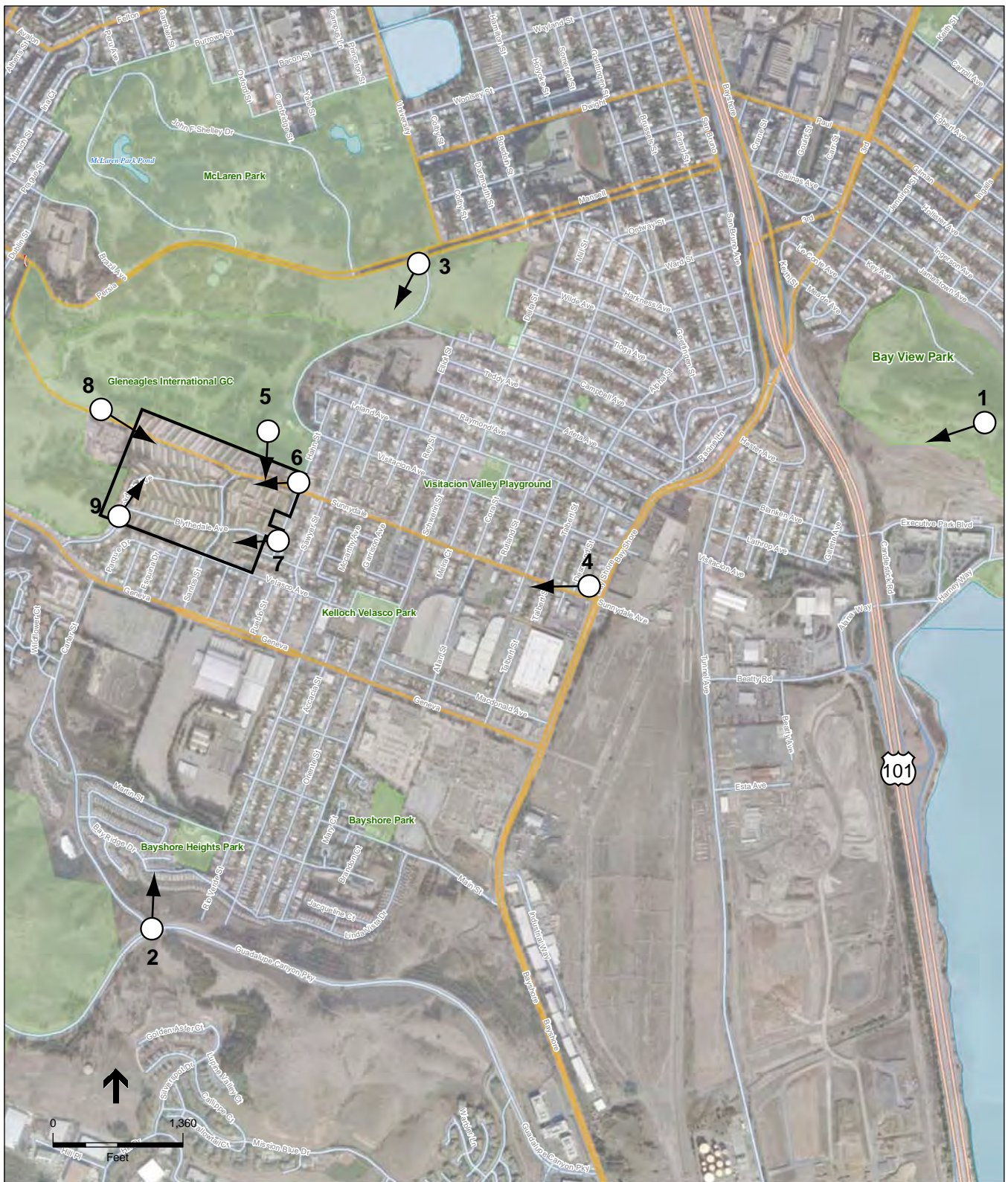
presented **Figures 3.4-2** through **3.4-6** and referenced throughout the discussions of views below. The key to the location from which each photograph was taken is mapped in **Figure 3.4-1**. The photographs are provided to illustrate the existing character and aesthetics within and around the project site, and to show the views and visual characteristics that are visible from and across the project site.

Figure 3.4-2 illustrates long-range views of the project site from Bayview Park (Viewpoint 1) and from the intersection of Guadalupe Canyon Parkway and Carter Street (Viewpoint 2), both of which are located at elevations higher than the project site and offer sweeping panoramic views of the valley (from east and south directions, respectively). These images illustrate the project site (almost in its entirety) within the relatively dense urban setting of the valley floor. In both images, the existing structures appear as long rows of nondescript low-rise buildings, generally blending into the background. Greenery associated with McLaren Park and the steep variations in topography are also visible in the background of both images. The site's development pattern (multiple rows of identical buildings) differs from that of the surrounding residential blocks; however, this project site feature is not immediately visible because the site does not dominate these views. Rather these views are dominated by the surrounding greenery, nearby hillsides, and the Cow Palace.

A similar long-range view of the project site is presented from Viewpoint 3 (top image in **Figure 3.4-3**) which shows the site from the McLaren Park designated vista point at Visitacion Avenue and Mansell Street looking southwest. Similar to images above, from this vantage point, the project site is visible almost in its entirety and is shown within the context of the valley floor. As discussed above, the project site conveys the appearance of barracks set within a built-up urban setting, surrounded by residential neighborhoods and various surrounding open spaces. The open areas dominate the foreground, while the project site and the nearby Cow Palace are visible in the background, with San Bruno Mountain rising beyond. While this panoramic view of the valley floor can be considered scenic, the project site itself does not contribute substantially to its scenic quality.

From the intersection of Sunnydale Avenue and Bayshore Boulevard (Viewpoint 4 shown in the bottom image of **Figure 3.4-3**), the westerly mid-range view of the project site is largely obscured by intervening topography and development, and the site is not visible except for a few rooftops that can be seen in the distance. Rather, this view is dominated by the low-rise residential buildings on either side of Sunnydale Avenue, as well as utility posts and overhead wires.

A southerly mid-range view of the project site from the Herz Playground is shown in Viewpoint 5, **Figure 3.4-4** (top image). Herz Playground is managed by the San Francisco Recreation and Park Department (along with the adjacent Coffman Pool) and provides a play structure with sand pit, tennis courts, basketball court, and a combined soccer/baseball/softball field. There are also picnic tables, restrooms and on-site parking. From this vantage point, the project site is largely obscured by intervening vegetation that lines the southernmost edge of the playground, although some of the northernmost buildings are visible between the trees. These buildings are low-rise and residential in character, although otherwise non-descript and they do not dominate, enhance, or diminish the quality this view.



— Project Site

SOURCE: Microsoft Virtual Earth, 2010

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-1
Viewpoint Location Map



Viewpoint 1: From Bayview Park looking west at the project site



Viewpoint 2: From Guadalupe Canyon Parkway & Carter Street intersection looking north at the project site

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-2

Existing Views from Viewpoints 1 and 2



Viewpoint 3: From Visitacion Avenue and Mansell Street looking southwest at the project site



Viewpoint 4: From Sunnydale Avenue and Bayshore Boulevard intersection looking east toward the project site

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-3

Existing Views from Viewpoints 3 and 4



Viewpoint 5: From Herz Playground looking south at the project site



Viewpoint 6: From Sunnydale Avenue and Hahn Street intersection looking east at the project site

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-4
Existing Views from Viewpoints 5 and 6

Short-range views from vantage points within the project site are presented in Viewpoints 6 through 9 (**Figures 3.4-4 through 3.4-6**). These images showcase the various features of the project site, including the existing buildings, landscaping, lighting, vegetation, and roads. As shown in Viewpoint 6, views along Sunnydale Avenue consist of the two-story residential buildings on either side of the two-lane road (although the structures on the south side are more visible), patches of poorly maintained landscaping, inconsistent patterns of street trees, and approximately 25-foot-tall light poles. The view is typical of urban settings and is not considered visually sensitive or unique.

Viewpoint 7 illustrates rows of the two-story residential buildings along either side of Blythedale Avenue, which rises and curves from view in the distance. The unadorned architecture of the buildings is clearly visible in these views, as well as the poorly maintained vegetation. The existing roadway, light posts, overhead utility wires and narrow sidewalks are also visible from this vantage point.

Viewpoint 8 illustrates views toward the project side from a vantage point along its west perimeter (on the edge of McLaren Park). This view shows John McLaren Children's Center in the foreground with a narrow sliver of the project site beyond. This view is dominated by the vast expanse of the asphalt roadway with the project site being largely obscured by a drop in elevation and the curvature of the road. Large trees can also be seen on both sides of the street, as well as a narrow sidewalk on the southern side of the road.

Viewpoint 9 is similar to Viewpoint 8 described above, showing architecturally unadorned two-story structures along both sides of Brookdale Avenue. The changes in elevation are clearly visible from this vantage point, with residences shown in rows on a downward sloping hillside. Street trees and light posts can also be seen in this view. In the background, McLaren Park and Bayview Hill are also visible.

While some of the images described above provide panoramic views of the surrounding hillsides, parks, or various neighborhoods, none of them can be characterized as unique. Such views are commonly available throughout many parts of the city. While the existing development pattern departs from the common block and lot pattern seen throughout the city, the site in general provides views that are typical of urban development.

Light and Glare

Sources of light and glare in the project site are generally limited to the interior and exterior lights of buildings, parking lot lighting, and street lighting. Lighting is not present in the existing open spaces between buildings. In addition, cars and trucks traveling to, from, and within the project site also represent a source of glare. These sources of light are typical of developed urban areas.



Viewpoint 7: From Blythedale Avenue and Hahn Street intersection looking east at the project site



Viewpoint 8: From Sunnydale Avenue looking southeast toward the project site

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-5
Existing Views from Viewpoints 7 and 8



Viewpoint 9: From Brookdale Avenue looking northeast at the project site

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.4-6
Existing Views from Viewpoint 9

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3.5 Socioeconomics/Population and Housing

This section discusses the population and housing, and socioeconomic setting for the project site. Data for the project site is compared to the greater Visitacion Valley neighborhood and the City and County of San Francisco. The study areas are shown in **Figure 3.5-1**. For the purposes of this document, the boundaries of the Visitacion Valley neighborhood are the same as those defined by the San Francisco Neighborhoods Socio-Economic Profiles.¹ This is generally defined as Brazil Avenue and Dwight Street to the north, Highway 101 to the east, the San Francisco County line and Geneva Avenue to the south, and the western edge of the Crocker Amazon Playground and McLaren Park to the west.

Table 3.5-1, below, shows the estimated and projected population, households, and jobs for the City and County of San Francisco.

**TABLE 3.5-1
POPULATION ESTIMATES AND PROJECTIONS FOR SAN FRANCISCO**

	Population	Households	Wage and Salary Jobs
2010	805,235	345,811	568,720
2020	890,400	379,600	671,230
2030	981,800	413,370	707,670

SOURCES: Plan Bay Area, 2013

3.5.1 Population

As of 2010, the Visitacion Valley neighborhood had a population of approximately 21,130 persons,² or approximately 2.6 percent of the overall San Francisco population. The project site has a population of approximately 1,700 persons.³

3.5.2 Housing

As of January 2014, San Francisco had approximately 381,400 dwelling units and a vacancy rate of 8.2 percent.⁴ The Visitacion Valley neighborhood has approximately 5,900 dwelling units, which is 1.6 percent of the overall San Francisco housing stock.⁵ The Visitacion Valley neighborhood has a

¹ San Francisco Planning Department, 2012. San Francisco Neighborhoods Socio-Economic Profiles – American Community Survey 2006-2010. May 2012. Available online at: <http://www.sf-planning.org/modules/showdocument.aspx?documentid=8779>, accessed April 11, 2013.

² *Ibid.*

³ LFA Group, 2011. Baseline Evaluation Data for Sunnydale. Fiscal year July 1, 2010 to June 30, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2014, with 2010 Benchmark*. Sacramento, California, May 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ See Note 1.



SOURCE: San Francisco Planning Department, 2013; and ESA, 2013

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.5-1
Project Site and Neighborhood Context

vacancy rate of 5 percent.⁶ As discussed in Section 1.1.2, the project site has approximately 785 dwelling units in 94 buildings between both the Sunnydale and Velasco complexes, about 8 percent of which are vacant.⁷ There are 764,892 square feet of residential space in these complexes.

3.5.3 Employment

The project site includes 29,500 square feet of community program space. Employment opportunities in the Visitacion Valley neighborhood are primarily limited to commercial uses along Leland Avenue and Sunnydale Avenue. As of 2010 approximately 9,230 residents of the neighborhood were employed with an overall unemployment rate of 12 percent.⁸

⁶ *Ibid.*

⁷ Mercy Housing California, personal communication with Environmental Science Associates, August 9, 2013.

⁸ *Ibid.*

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3.6 Environmental Justice

U.S. Department of Housing and Urban Development (HUD) regulations, found at 24 CFR Parts 50 and 58, mandate compliance with Executive Order 12898 (EO 12898), *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, for HUD and/or HUD applicants.

HUD defines low-income through a comparison of annual household income for households of various sizes with the area median income. HUD defines income guidelines for extremely low-income households (those with 30 percent or less of the area median income), very low-income households (those with 50 percent or less of the area median income) and low-income households (those with 80 percent or less of the area median income).

Low-income population is defined as any readily identifiable group of low-income persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by the proposed program, policy, or activity.

Minority population is defined as any readily identifiable group of minority persons who live in geographic proximity and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed program, policy or activity.

A *minority population* is considered to be present if the minority population percentage of the affected area is greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (census tracts are generally considered appropriate). Guidance from the Council on Environmental Quality (CEQ) states, "Minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis."¹

3.6.1 Minority Communities

Table 3.6-1 below shows the racial and ethnic profile of the project site compared to the profiles of the City of San Francisco and California as a whole. Data for the project site is based on site-specific data,² while the remainder is based on the U.S. Census, 2010. **Table 3.6-2** shows the racial and ethnic profile for the census tracts that include and surround the project site as shown on **Figure 3.6-1**.

¹ CEQ; *Environmental Justice, Guidance under the National Environmental Policy Act*, December 10, 1997.

² LFA Group, 2012. Baseline Evaluation Data for Sunnydale. Fiscal year July 1, 2010 to June 30, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

**TABLE 3.6-1
STUDY AREA ETHNIC PROFILE**

	Project Site¹	San Francisco²	California²
Percent White	20.0%	48.5%	57.6%
Percent African American	39.0%	6.1%	6.2%
Percent Asian/Pacific Islander	23.0%	33.7%	13.4%
Percent American Indian	1.0%	0.5%	1.0%
Percent Other Race	17.0%	6.6%	17.0%
Percent Multiracial	1.0%	4.7%	4.9%
Percent Minority	80.0%	58.1%	59.9%

NOTE: Minority population percentage for the purposes of this study was determined to be the total population (100%) minus the population identified as Non-Hispanic/Latino, White alone.

SOURCE: ¹ LFA Group, 2011. Baseline Evaluation Data for Sunnydale. Fiscal year July 1, 2010 to June 30, 2011.
² U.S. Census, 2010

**TABLE 3.6-2
PROJECT SITE AND IMMEDIATE VICINITY**

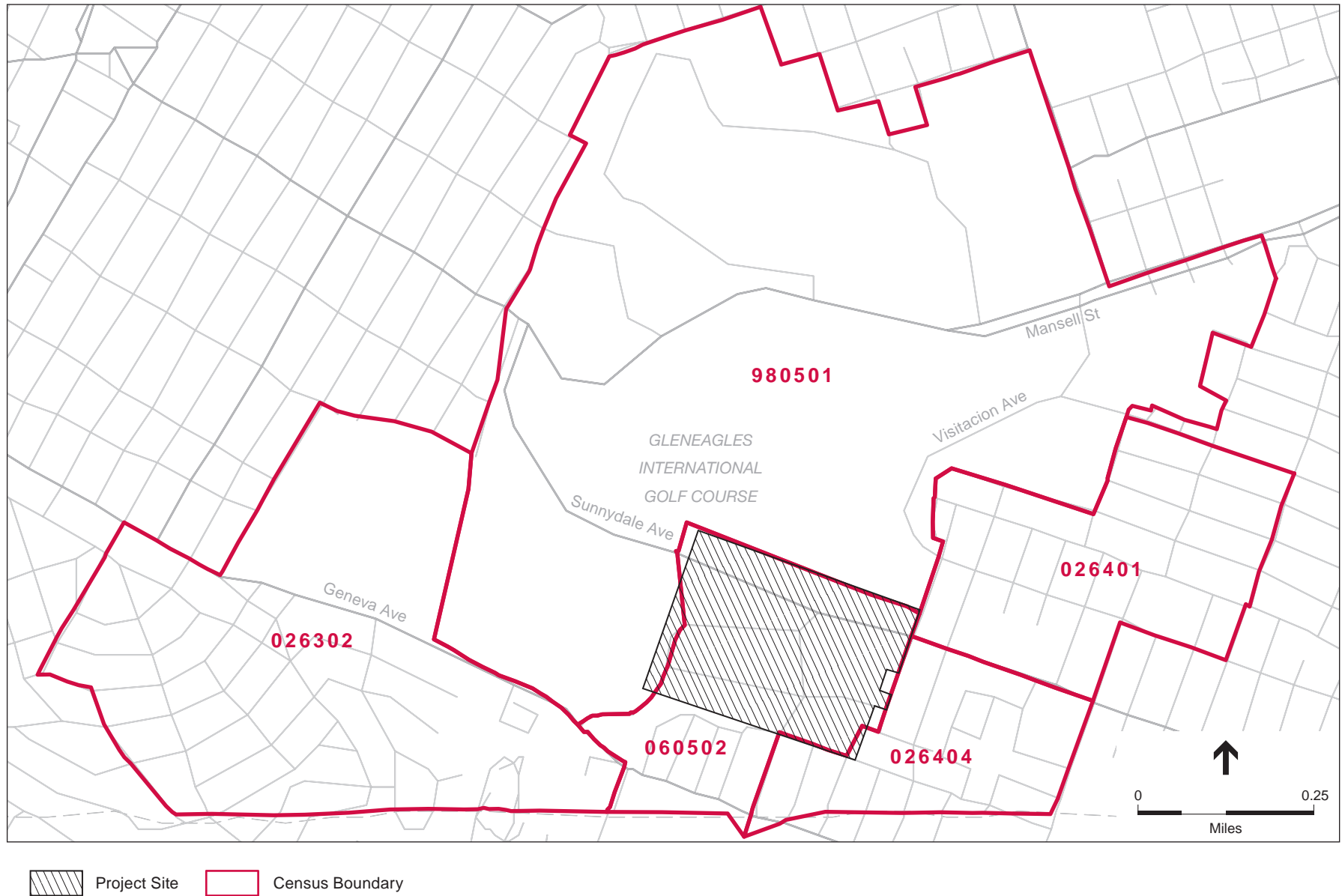
	Vicinity		Project Site and Vicinity		
	Tract 026302	Tract 026401	Tract 026404	Tract 060502	Tract 980501
Percent White	23.4%	8.3%	10.3%	10.4%	10.9%
Percent African American	4.5%	10.4%	18.5%	30.7%	12.8%
Percent Asian/Pacific Islander	54.7%	64.6%	47.4%	37.2%	62.6%
Percent American Indian	0.3%	0.4%	0.8%	0.5%	0.9%
Percent Other Race	11.9%	13.4%	16.5%	14.8%	9.9%
Percent Multiracial	5.1%	2.8%	6.5%	6.3%	2.9%
Percent Minority	86.1%	95.8%	98.1%	95.8%	95.2%

NOTE: Minority population percentage for the purposes of this study was determined to be the total population (100%) minus the population identified as Non-Hispanic/Latino, White alone.

See Figure 3.6-1 for location of Census Tracts.

SOURCE: U.S. Census, 2010

As indicated in the tables above, the minority population of the project site and the immediate vicinity are greater than 50 percent, although this is also true for San Francisco and the State of California. The minority population percentage of the project site and immediate vicinity is meaningfully greater than that of San Francisco and the State as the minority population for the project site and immediate vicinity is approximately 20 to 40 percent higher in comparison to the County and State. For these reasons a minority population is considered to be present at the project site and immediate vicinity.



SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 3.6-1
2010 Census Tracts

3.6.2 Low-Income Communities

Poverty Levels

The Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty. The weighted average poverty level for a family of four was \$23,834 in 2013.³ As shown in **Table 3.6-3**, the project site median household income is \$13,487 and percentage of families and individuals below the poverty level is 70.0. This information is compared to San Francisco and California. **Table 3.6-4** shows the median household income and poverty statistics for the census tracts that include and surround the project site as shown on Figure 3.6-1.

**TABLE 3.6-3
STUDY AREA POVERTY STATISTICS**

	Project Site	San Francisco	California
Households	701	338,366	12,433,172
Median Household Income	\$13,487	\$72,947	\$61,632
Families below poverty level	70.0%	7.6%	10.8%
Individuals below poverty level	Not Available	12.3%	14.4%

SOURCE: 2007-2011 American Community Survey, 5 year estimates

**TABLE 3.6-4
PROJECT SITE AND IMMEDIATE VICINITY**

	Tract 026302	Tract 026401	Tract 026404	Tract 060502	Tract 980501
Median Household Income	\$60,915	\$49,821	\$44,219	\$23,071	\$17,679
Families below poverty level	2.7%	10.9%	10.1%	41.4%	8.3% ²
Individuals below poverty level	3.3%	10.6%	9.4%	38.0%	27.3%
Households	1,411	1,068	653	917	234
Median Household Income in Comparison to County/State ¹	Not Low Income	Low-Income	Low-Income	Very Low-Income	Extremely Low-Income

NOTE:

¹ The Income Comparison in the bottom row was determined by comparing the median household income for each tract to the median income household income for San Francisco (\$72,947 as noted in Table 3.6-3). Per HUD guidelines the following definitions were used: Low-Income – 51% to 80% of area median income; Very Low-Income – 31 to 50% of area median income; Extremely Low-Income – 30% or less of area median income.

² The percentage of families below the poverty level in Census Tract 980501 (8.3 percent) seems low in comparison to the other census tracts and median household income. It should be noted that the margin of error for this percentage is 13.4 percent meaning the actual percentage of families below the poverty level could be as high as 21.7 percent. Another factor which may contribute to the low percentage is that 49 families or 45 percent of reporting families within the census tract have an income of between \$15,000 to \$24,999 which is considered low income but may be just above the poverty line.

SOURCE: 2007-2011 American Community Survey, 5 year estimates

³ U.S. Census Bureau, 2013. Poverty Thresholds, Available online at: <https://www.census.gov/hhes/www/poverty/data/threshld/>

The median household income for the project site is considered to be extremely low-income (30% or less) in comparison to both San Francisco and California median household income. Additionally the percentage of families below the poverty level is nine times higher for the project site in comparison to San Francisco and six times higher in comparison to California. The median household income for all census tracts that include and surround the project site are considered to be low-income (including very low-income and extremely low-income), with the exception of Tract 263.02. For these reasons the project site and immediate vicinity are considered to be low-income, with the exception of areas south of Geneva Avenue (corresponding to Census tract 263.02).

3.6.3 Outreach to Low-Income and Minority Communities

The project sponsor organized a community planning process to develop the Sunnydale-Velasco HOPE-SF Master Plan. Between November 2008 and May 2011, a total of 19 meetings and workshops were held at the project site and the surrounding community to develop the Master Plan.⁴ Meeting notices were distributed in English, Chinese, Spanish and Samoan, and language interpretation and activities for children were provided.

Upon initiation of the EIR/EIS, two public scoping meetings to gather input from residents and stakeholders for the preparation of this Draft EIR/EIS were held. The first meeting was held on January 5, 2013, at Visitacion Valley Branch Library at 201 Leland Avenue, San Francisco, CA. The second meeting was held on Saturday, January 12, 2013, at the Sunnydale Community Room, 1654 Sunnydale Avenue, San Francisco, CA. Notice of the public scoping meetings, directions on where to send written comments, and contact details for further information were distributed to applicable agencies and organizations, tenants of the project site, and addresses within a 300-foot radius of the project site. Notices were provided in English, Cantonese, Samoan and Spanish languages, and translation services were offered.

The Draft EIR/EIS is being distributed for a 60-day review and comment period. Additional details regarding review periods during the EIS process are included in **Section 1.5.3**.

⁴ Sunnydale Development Co., LLC, Choice Neighborhoods Planning Grants, Attachment 8: Resident Involvement Certification, April 26, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

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3.7 Cultural and Paleontological Resources

Cultural resources include architectural resources, archeological resources, and human remains. Paleontological resources include fossilized remains of vertebrate and invertebrate organisms, fossil tracks, and plant fossils. This section provides a setting for cultural and paleontological resources that might be present in the vicinity of the proposed project.

The following analysis is based on historic architectural and landscape evaluations that were conducted for the project site in 2001 and 2010.^{1,2} The archeological analysis is adapted from the archeological sensitivity assessment completed for the project in 2011.³

3.7.1 Setting

Definitions

Historical Resources and Historic Properties

Based on the CEQA Guidelines, Section 15064.5(a), historical resources include, but are not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archeologically significant or that is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Generally, a resource is considered by a lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (CRHR).

Under federal regulations, historic properties are defined as any prehistoric or historic district, site, object, building, or structure included in or eligible for inclusion in the National Register of Historic Places (NRHP). Historic properties that meet federal criteria are also considered historical resources under CEQA, as in accordance with California per *Public Resources Code* (PRC) Section 5024.1(d)(1). Historical resources and historic properties refer to both significant architectural/structural resources and significant archeological resources.

Area of Potential Effects

Federal regulations require the identification of historic properties within the “Area of Potential Effects” (APE) of a project, defined as the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties (36 CFR 800.16[d]). For compliance with CEQA, the San Francisco Planning Department, Environmental

¹ Carey & Co. Inc. Architecture. *Draft Historic Resource Evaluation, Sunnydale Housing Development, San Francisco, California*, prepared for San Francisco Housing Authority, May 25, 2001. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Carey & Co. Inc. Architecture. *Historic Resource Evaluation, Velasco Housing Project, San Francisco, California*, prepared for Sunnydale Development Co., LLC, April 26, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ Byrd, Brian, and Rebecca Allen, *Archaeological Sensitivity Assessment for the Sunnydale-Velasco Hope San Francisco Redevelopment Project, City of San Francisco, California*. Prepared for ESA, 2011.

Planning section (EP) uses the term CEQA-APE (C-APE). This analysis uses the term C-APE, which is synonymous with APE for this project.

The C-APE includes all areas of proposed ground-disturbing activity and associated staging areas. Project activities that are considered to be within the C-APE include the project site itself, as all physical changes would be contained within the property boundaries. The exact locations within the property boundaries and the depth of disturbance have not yet been finalized. Maximum excavation, however would be 45 feet (13.5 meters) below the current ground surface. The entire site would be graded and cut to some degree. The excavation for the building foundations would be 10 to 15 feet (3.0 to 4.5 meters) in some areas to make flat pads. The roads and pathways would be graded to have slopes that are compliant with the Americans with Disabilities Act. Some buildings would have a combination of foundations with spread footings that are approximately 3-to-5 feet (0.9-to-1.5 meters) deep, and drilled piers that could be 20-to-30 feet (6-to-9 meters) deep. Underground parking would also be constructed. In some situations, deeper foundations may be needed with excavation, plus drilled piers to about 45 feet (13.5 meters).

The C-APE for paleontological resources is similar to the C-APE for architectural and archeological resources; however, surface-disturbing activities (e.g., vegetation clearing) would not disturb or destroy bedrock where paleontological resources could be located. Therefore, areas of surface disturbance are not considered to be within the C-APE for paleontological resources.

Environmental Setting

This section has been adapted from Byrd and Allen.⁴ The C-APE is on the San Francisco peninsula two kilometers (1.2 miles) east of San Francisco Bay. Specifically, it is on the western-most edge of Visitacion Valley, north of San Bruno Mountain and Guadalupe Valley. Visitacion Valley is a small alluvial setting bounded along the eastern bay shore margins by Candlestick Point on the north and Visitacion Point on the south. The Black Hills run along the north and much of the western edge of the valley, while the northern-most hills of San Bruno Mountain bound Visitacion Valley on the south, creating a small, alluvial valley some two kilometers (1.2 miles) wide and three kilometers (1.9 miles) long.

Geologically, the C-APE is on the western side of the California Coast Ranges geomorphic province. The Coast Ranges comprise primarily Jurassic- and Cretaceous-age rocks and include a tectonic mix of sandstone, chert, altered basalt referred to as greenstone, and serpentinite, collectively referred to as the Franciscan Complex. The C-APE geology consists of Quaternary slope debris or ravine fill on the west, and Quaternary undifferentiated deposits of sand, silt, and clay on the east (which underlie the majority of the C-APE).^{5,6} Bedrock is mapped west of the property as sheared Franciscan Complex, which is consistent with observed materials in outcrops

⁴ Byrd and Allen, 2011 (see footnote 3, p. 3.7-1)

⁵ Engco, Incorporated, *Geotechnical Report – Sunnydale – Velasco Redevelopment*, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ Bonilla, M.G., Preliminary geologic map of the San Francisco South 7.5' quadrangle and part of the Hunters Point 7.5' quadrangle, San Francisco Bay area, California: A digital database, 1998.

and boring samples during a geotechnical investigation for the project.⁷ For the eastern portion of the project site, a geotechnical consultant previously found the property to be underlain by silty and clayey sand.⁸ The upper 5 feet was typically loose and became denser with depth. Very loose to loose sands were encountered in the upper 1 to 5 feet. Bedrock was not encountered in the maximum 15 feet explored for the eastern portion of the site but was encountered at depths ranging from 5 to 43 feet below ground surface on the western portion of the site. Bedrock was extremely weak to very weak, very closely fractured to crushed, highly weathered and sheared metasedimentary claystone, siltstone and sandstone of the Franciscan Complex.⁹

Nineteenth-century maps document a more natural setting for Visitation Valley, revealing the valley contained two or three small, seasonal drainages that flowed west to east toward the marsh lands that bordered the bay. Two of these seasonal courses are situated in the general vicinity of the C-APE.¹⁰

Today the area is fully urbanized and the modern shoreline of the Bay is farther to the east owing to late nineteenth- and twentieth-century landfill efforts. Modern ground surface elevation in the C-APE ranges from 76 meters (250 feet) on the west to 23 meters (75 feet) at the southeast corner. Overall, the C-APE slopes 53 vertical meters (175 vertical feet) toward the Bay from a high point at the western edge down toward Geneva Avenue and Hahn Street. The high point of the project location is at the base of modern-day John McLaren Park, which rises to 158 meters (520 feet) north of the C-APE.

Paleoenvironmental Reconstruction

This section has been adapted from Meyer in Byrd and Allen.¹¹ The Bay Area has undergone a series of substantial large-scale environmental changes since the late Pleistocene, when Native Americans may have first entered and inhabited the region.¹² These changes included rising sea levels, widespread sediment deposition, and corresponding fluctuations in the distribution and availability of important natural resources. As a result, the archeological record and the potential for archeological deposits in the region are better understood when viewed within the history of Bay Area environmental and landscape changes.

Many of the late Pleistocene and early Holocene land surfaces located around the Bay were overlain by deposits of younger alluvium that are generally less than 6,000 years old. Stratigraphic and radiocarbon evidence indicates that the Holocene-age alluvial deposits average two to three meters (6.5 to 9.8 feet) in thickness, with deposits exceeding ten meters (33 feet) in a few areas. These older land surfaces usually exhibit well-developed buried soils (paleosols) that represent a substantial

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Ibid.*

¹⁰ Byrd and Allen, 2011.

¹¹ Byrd and Allen, 2011.

¹² Meyer, Jack, and Jeffrey Rosenthal, Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. Prepared for Caltrans District 4, 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

stratigraphic boundary in the region. As a result, older archeological sites located in and around the Bay were submerged by sea level rise and/or buried by sediment deposition.

Historic-era Changes

More recent changes on the northern peninsula include the introduction of non-native plant species, which generally coincides with the arrival of the Spanish and later Euro-American settlers during the late 1700s and 1800s. During the late 1800s, intense drought and livestock grazing and other activities associated with historic-era settlement greatly reduced the protective cover of vegetation, which made the landscape particularly susceptible to erosion.¹³ Around this same time, huge amounts of sediment were deposited within the Bay, largely because of hydraulic-mining for gold in the Sierra Nevada. Lasting evidence of these changes is found in estuarine deposits and along many stream channels, where the lowest terraces often comprise historic-era sediments.¹⁴ Finally, thick deposits of artificial fill were placed around the margins of the Bay to reclaim the marshes and wetlands for human development, including the small lagoon at the northeast edge of Visitacion Valley. While some archeological resources may have been partially or completely destroyed by historic-era development, others were likely buried by artificial fill.

Prehistoric-period Setting

Archeological resources include both prehistoric and historic-era archeological resources. This discussion of prehistoric archeology addresses cultural patterns in the project C-APE through the time of European contact. Historic-era archeological resources, starting with the Mission period, are discussed below under the heading Historic-era Setting.

Prehistoric Context

Archeologists have developed individual cultural chronological sequences tailored to the archeology and material culture of each subregion of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Milliken, et al.¹⁵ provides a framework for interpreting the San Francisco Bay Area by dividing human history in California into three broad periods: the Early Period, the Middle Period, and the Late Period. Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, sociopolitics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

¹³ Burcham, 1957:171 in Byrd and Allen, 2011.

¹⁴ Knudsen, Keith L., Janet M. Sowers, Robert C. Witter, Carl M. Wentworth, and Edward J. Helley, Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: A Digital Database. US Geological Survey Open-File Report 2000-444, Online Version 1.1, Menlo Park, California, <http://pubs.usgs.gov/of/2000/of00-444/>. 2010, Updated September 22, 2005, Accessed December 2008.

¹⁵ Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson. Punctuated Culture Change in the San Francisco Bay Area, In *Prehistoric California: Colonization, Culture, and Complexity*. Edited by T.L. Jones and K.A. Klar, pp. 99–124, AltaMira Press. 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The *Paleoindian Period* (13,500 to 10,000 before present [BP]) was characterized by big-game hunting over broad geographic areas. Evidence of human habitation during the Paleoindian Period has not yet been discovered in the San Francisco Bay Area. During the *Lower Archaic* (10,000 to 5500 BP), geographic mobility continued from the Paleoindian Period and is characterized by use of the millingslab and handstone as well as large, wide-stemmed and leaf-shaped projectile points. Cut shell beads and the mortar and pestle are first documented in burials during the *Early Period (Middle Archaic; 5500 to 2500 BP)*, indicating the shift to sedentism. During the *Middle Period*, which includes the *Lower Middle Period (Initial Upper Archaic; 2500 to 1570 BP)* and *Upper Middle Period (Late Upper Archaic; 1570 to 950 BP)*, geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, as well as obsidian and chert concave-base projectile points, and the occurrence of sites in a wider range of environments suggest that the economic base was more diverse. By the Upper Middle Period, mobility began to be replaced by the development of numerous small villages. A “dramatic cultural disruption” occurred around 1570 BP, evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the *Initial Late Period (Lower Emergent; 950 to 450 BP)*, social complexity developed toward lifeways within large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

Ethnographic Context

Based on a compilation of ethnographic, historic, and archeological data, Milliken describes a group known as the Ohlone, who once occupied the general vicinity of the C-APE.¹⁶ While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these “static” descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this masks Native adaptability and self-identity. California’s Native Americans never saw themselves as members of larger “cultural groups,” as described by anthropologists. Instead, they saw themselves as members of specific villages, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins.

Levy¹⁷ describes the language group spoken by the Ohlone, known as “Costanoan.” This term is originally derived from a Spanish word designating the coastal peoples of Central California. Today Costanoan is used as a linguistic term that references to a larger language family spoken by distinct sociopolitical groups that spoke at least eight languages (as different as Spanish is from

¹⁶ Milliken, Randall, *A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1769–1810*. Ballena Press, Menlo Park, California, 1995. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁷ Levy, R., *Costanoan*. In *California*, edited by R.F. Heizer, pp. 485–495. *Handbook of North American Indians*, Volume 8. William G. Sturtevant, general editor. Smithsonian Institution, Washington D.C., 1978. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

French) of the same Penutian language group. The Ohlone once occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. Milliken¹⁸ considers the northern portion of the San Francisco peninsula (including the City of San Francisco) as the tribal/regional community area of the *Yelamu*, one of seven tribal areas on the San Francisco peninsula (north of San Francisquito Creek). The *Yelamu* are estimated to have had a population of 160 and population density of one person per square kilometer (2.7 per square mile) at the time of contact.¹⁹

Economically, Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clamshell beads, and even shooting trespassers if caught. After European contact, Ohlone society was severely disrupted by missionization, disease, and displacement. Today, the Ohlone still have a strong presence in the San Francisco Bay Area, and are highly interested in their historic and prehistoric past.

Historic-Era Setting

The following historic-era setting of the project C-APE and vicinity has been adapted from the historic resource evaluation reports prepared by Carey & Company, Inc., in 2001 and 2010.^{20,21}

The project site was on the periphery of lands developed and occupied by Spanish colonists, missionaries, and converted Native Americans during the Mission Period (1769–1821). Lands within the project site were not inhabited or developed during the Mission Period. Exploratory parties and missionizing efforts to gather new sources of neophytes (Native American converting to Catholicism, literally “new citizens”) may have passed through the area. Native Americans coming into the mission system may have temporarily occupied the area, but development and alteration of the land would wait until the twentieth century.

During the Mexican Period in California (1822–1848), California’s Mexican Governors granted thousands of acres of land to individual Mexican citizens and other loyalists. The land grant system not only had the effect of concentrating large expanses of land into a few hands, but also created a heritage of landmarks and street courses that exist to the present day. In 1841, Governor Juan Alvarado granted extensive lands in the San Francisco Bay Area to a merchant named Jacob Primer Leese. Although an Anglo, Jacob Leese was able to claim Mexican citizenship as he was Spanish-speaking, a prominent merchant, and had the good fortune to marry one of General Vallejo’s sisters. The grant consisted of 943 acres known as *Cañada de Guadalupe y Rodeo Viejo* in

¹⁸ Milliken 1995.

¹⁹ Milliken 1995, 2006:Figure 5.

²⁰ Carey & Co. Inc. Architecture, 2001, *op. cit.*

²¹ Carey & Co. Inc. Architecture, 2010, *op. cit.*

modern-day San Francisco County, stretching from the present-day city of Brisbane to the area of San Bruno Mountain. Although the Lesse family grew, it did not live on or develop the land. In 1843, Leese traded the acreage to Robert T. Ridley in exchange for lands in Lake County. Like Leese before him, Ridley did not develop the lands, nor did either family live on the lands. Between 1851 and 1865, the original land grant had been further subdivided and sold to various individuals, but never developed.

Visitacion Valley

During the American Period (1848–present), the project site was at the western extent of what has come to be known as “Visitacion Valley.” The name is derived from the original land grant. Today this self-defined valley community is approximately defined by the western boundary of McLaren Park and Gleneagles Golf Course, the northern boundary of Mansell Boulevard, the eastern boundary of Candlestick Cove, and the southern boundary of the county line between San Francisco and San Mateo.

A review of historic maps illustrates the history of this valley community, as well specific history of the project site. Maps from 1864 show that the only development in Visitacion Valley were the San Bruno Road, a bridge, and a way station named “Six Mile” house. All developments were well east of the project site, which remained undeveloped at this time. Maps from 1899 show buildings to the east of the project site in the community that later would become Visitacion Valley. For the most part, though, the project site remained rural. Maps from 1908 to 1912 shows that land has been further subdivided, with cross streets running south from Sunnysdale Avenue. A small scattering of about eight buildings first appear in the project site on the 1915 United States Coast Guard (USGS) map.

By the turn of the twentieth century, this area began to be known as the Sunnysdale Neighborhood, which attracted primarily Italian and Irish immigrants. The open area of what is now McLaren Park was planted with imported eucalyptus trees shortly after its creation and dedication in 1927. The Park quickly became a popular recreational destination for Visitacion Valley residents. The Six Mile House also remained a popular destination, until 1938 when the building was razed.

The 1939 USGS map shows no structures within the project site. The structures shown on the 1915 map were temporary in nature, and had been removed by 1939. Dirt roads are the only indication of activity within the project site. The 1939 map also shows the growth and expansion of Visitacion Valley area surrounding the project site. The most intensive land use of the project site was soon to come, with the construction of the Sunnysdale Housing Project in 1941, as described below.

Sunnysdale and Velasco Housing Projects

The Sunnysdale Housing Project is associated with the early twentieth-century development of public housing in the United States, and in San Francisco. The 1937 United States Housing Act provided the necessary institutional and financial background whereby cities would fulfill the role of steward and guardian of projects financed by the federal government. San Francisco, along with all other major cities, established its own municipal housing authority in 1938.

The area south of the 1937 City limits, but within San Francisco County, known for its immigrant neighborhoods and remaining open spaces, was a prime area for such a housing development. World War II brought yet more industry to San Francisco's shores, and a more urgent need to house the thousands of industrial workers that came to the City in search of employment. Hunter's Point and the Candlestick Cove area were prime locations for ship building industries, as well as others. The area attracted many immigrant groups, as well as a large population of African Americans.

Architects Albert F. Roller and Roland I. Stringham designed the Sunnydale housing project in 1939. Landscape architect Thomas D. Church designed the urban setting. The housing project began construction in 1941 and was one of the largest pre-World War II housing projects within San Francisco County. The design of the housing complex consisted of 767 units in 90 buildings on a nearly 50-acre tract bounded by John McLaren Park to the north and west, Hahn Street to the east, and Velasco Street to the south. Curvilinear streets wind through the complex. The footprint of each building was aligned with the natural topography and generally oriented according to the slope. This alignment gives the appearance that the buildings are situated randomly on the site, but they actually follow the natural contours of the land to reduce the required amount of soil cut and fill and to help prevent erosion. While every building is quite similar in style and materials, there are six different types of buildings within the complex, each labeled alphabetically from A to F. An Administration Building was located at the junction of Santos Street and Sunnydale Avenue, which currently serves as the on-site San Francisco Housing Authority (SFHA) offices, as well as recreation and health facilities.

The Sunnydale Housing project was organized as a "super block," a planning concept that emphasized giving less land to roadways and more land use for common areas, such as yards. Curvilinear pathways, adherence to the natural slope, and numerous trees and other vegetation plantings defined the original landscape plan designed by Thomas Church.

The circulation between the buildings consisted of concrete walkways, steps, and retaining walls. T-shaped poles with clotheslines strung between, located at the rear elevation of the buildings, were used for hanging laundry. The landscaping design was also minimal—between the concrete walkways was a combination of grass lawn and dirt, with some mature trees extant along the curvilinear streets. Paved parking areas were located between the buildings.

The housing project was constructed rapidly. A review of aerial photographs from 1941–1942 show that the construction's effect on the local landscape and neighborhood was immediate and apparent. While conforming to natural topography, efforts were made to grade the slopes to make them more suitable for occupation. By 1943, the area was completely transformed. Roadways were cut through the project site, slopes were graded and transformed to common-use yard areas, and many residences were constructed. Substantive alteration of the landscape in order to construct the housing units and roadway system is perhaps even more apparent, especially in contrast to the adjacent lands of McLaren Park.

The Velasco Housing Project was constructed in 1963 as one of many housing projects constructed in San Francisco between 1940 and 1965. Designed by architect William Mooser, the project

consisted of two two-story, reinforced concrete, rectangular in plan, single-gable buildings situated parallel to each other. The Velasco Housing Project added 18 units immediately adjacent to the Sunnydale Housing Complex.

Both the Sunnydale and Velasco housing projects remain much the same as they did when originally constructed in the 1940s and 1960s, respectively, although degradation of the landscaping within the project site was noted by 2010.

Cultural Sensitivity of the Project Site

Archeological Resources

Byrd and Allen completed an archeological sensitivity assessment for prehistoric and historic-era archeological sites in the project C-APE.²² This assessment is summarized below.

Prehistoric Archeological Site Sensitivity

No previously recorded prehistoric archeological sites are located within or near the C-APE. Given the fully urban nature of the project vicinity and the extensive terracing of the hillside, there is no potential for prehistoric sites on the current ground surface to be preserved.

In order to assess the potential for prehistoric sites that could be buried below artificial or natural fill, several sources of data were examined to ascertain whether the area would have been attractive for prehistoric habitation. Ancient land surfaces upon which such habitation may have occurred may remain preserved today or may have been destroyed by twentieth-century development.

The archeological assessment completed by Byrd and Allen²³ concluded that the C-APE is not considered to have a high potential for buried prehistoric sites owing to the lack of major drainages nearby and being some two kilometers (1.2 miles) from the edge of the bay wetlands (where a series of major prehistoric sites are concentrated). The eastern-most portion of the C-APE is considered to have a moderate potential for buried sites. This area, located between/adjacent to two seasonal drainages, was a low angle landform (less than 5% slope), portions of which may be preserved under 1.5 to 4.5 meters (5 to 15 feet) of artificial fill. The remainder of the C-APE is considered to have little or no potential for buried sites owing to the steep angle of the original landform and the extensive twentieth-century cut and fill activities that took place in this area.

Historic-era Archeological Sensitivity

No previously recorded historic-era sites are located within the C-APE. As noted in the historical context, evidence available from historic maps suggests that permanent non-Native American development of the project vicinity did not occur until the twentieth century. This area was on the southern periphery of San Francisco and north of the developments in San Mateo County. It was also on the western periphery of the Visitacion Valley developments.

²² Byrd and Allen, 2011.

²³ *Ibid.*

The earliest development of the project site is shown on the 1915 USGS map. This map shows at least eight structures within the C-APE, two or possibly three clustered near the eastern edge, and the others situated in two rows (one with four structures and one with two structures) farther to the west. Although their function is unknown, these structures were likely temporary in nature and lacking substantial foundations. Previous maps show no development, and the subsequent 1939 USGS map shows only roadways. As such, no other buildings are indicated in the C-APE until the Sunnydale Housing project was constructed across the entire current project footprint in 1941. This project included grading, terracing, and development of the project site that totally reconfigured the natural landscape.

The archeological assessment completed by Byrd and Allen concluded it is highly unlikely that any historic-era resources are preserved in the C-APE. Given the minor historical land use prior to the 1940s and the subsequent extensive reconfiguration of the project site landscape in 1941 (with cut and fill terracing to construct the Sunnydale Housing project), any buildings and near-surface features created prior to the 1940s are likely to have been destroyed. As such, the probability of encountering significant historic-era archeological resources is considered to be low.

Historic Architectural Resources

The proposed project site consists of two housing projects: the Sunnydale Housing Complex, which includes 767 units in 90 separate buildings on 48.83 acres, and the Velasco Housing Project, which includes 18 units in two separate buildings situated adjacent to the Sunnydale Housing Complex.

The two separate evaluations completed for the project by Carey & Co. in 2001 and 2010 found that while the buildings in both complexes are over 50 years old, and therefore meet the minimum age for potential listing in federal and state registers, none of the buildings exemplify any substantive principles of public architectural design, nor are any of the buildings known to be associated with historic events or any persons of significance. The landscape design has been degraded due to a lack of maintenance and natural plant attrition, and retains little integrity. As such, none of the buildings or landscape design are eligible for listing in the NRHP or the CRHR.²⁴ A summary of the evaluations completed for each housing project is provided below.

Sunnydale Housing Complex

The Sunnydale Housing Complex was designed by Albert F. Roller and Roland I. Stringham and was constructed in 1941. Roller, a self-taught modernist, designed the Masonic Auditorium on Nob Hill, as well as the 1938 renovation and expansion of the former San Francisco Call Building (now the Central Tower) at Third and Market Streets. He also collaborated with John Carl Warnecke and the firm of Stone, Marracini & Patterson on the 1959 Federal Building at 450 Golden Gate Avenue. Stringham designed the Berkeley Tennis Club building. The landscape design, a key

²⁴ *Ibid.*

feature of the complex by Thomas D. Church, was a preeminent landscape architect known for the development of the “California style” garden and considered a pioneer of the modern movement in landscape design. This complex was the largest of five pre-World War II permanent projects, which were a result of the need for housing as workers moved from outlying areas to take on defense-related jobs at the time.

The Sunnydale Housing Complex consists of 767 units in 90 separate buildings of six different types. However, all buildings are similar in style and materials. The evaluation describes the buildings as:

“rectangular in plan, constructed of reinforced poured-in concrete, and features a gabled flat tile roof. The buildings range from one to two stories, with two building types having a single story at the rear and two stories in front because of the sloped site. The windows are aluminum sliding sash replacements and the entry doors are solid wood. Most of the entries are paired with corrugated concrete dividers flanking the doorways and a flat concrete awning projection. These rather simple buildings have minimal architectural articulation and detail.”²⁵

The evaluation found that the exteriors of the buildings are in good condition, although some alterations and improvements have changed certain character-defining features of the buildings. Much of the original landscape design has been lost due to natural plant attrition and lack of maintenance.

Velasco Housing Project

The Velasco Housing Project was designed by William Mooser III, and was constructed in 1963 as one of many housing projects constructed in San Francisco between 1940 and 1965. Mooser, a third generation San Francisco architect, is perhaps best known for his landmark Santa Barbara County Courthouse of 1925. His most noteworthy local building (designed with his father, who was City Architect) is Aquatic Park, including the park’s former public bathhouse, now the National Maritime Museum.

The evaluation describes the project as consisting “of two two-story, reinforced concrete, rectangular in plan, single-gable buildings situated parallel to each other.” Further, “the buildings have asphalt shingle-clad roofs and one-over-one metal sash windows with wood surrounds and operational awning upper lites. Some windows are one-over-one double hung metal sash. Doors are wood. The northerly building features two exterior chimneys, while the southerly, shorter building features one.”²⁶

According to the historic resource evaluation reports prepared for this project, neither of these housing complexes or associated landscape design is considered a historical resource.²⁷

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

The C-APE contains no resources listed in Article 10 or Article 11 of the San Francisco *Planning Code* (i.e., designated city landmarks and buildings included within locally designated historic districts, including six downtown conservation districts). The closest Article 10 property to the C-APE is the Bayview Opera House located at 1601 Newcomb Avenue in San Francisco's Bayview neighborhood, approximately 2 miles northeast of the project site.

Similarly, C-APE contains no NRHP-listed or eligible properties at or near the project site. The closest National Register-listed property to the C-APE is the former Southern Pacific Roundhouse located in the City of Brisbane, approximately 0.8 miles southeast of the project site.

Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, snails, and marine coral), and fossils of microscopic plants and animals (microfossils). The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. Fossil discoveries not only provide a historical record of past plant and animal life but can assist geologists in dating rock formations. In addition, fossil discoveries can expand our understanding of the time periods and the geographic ranges of existing and extinct flora or fauna.

Existing conditions were evaluated based on review of existing site-specific geotechnical reports that did not include specifically evaluating paleontological resources, and paleontological literature from University of California Museum of Paleontology (UCMP) database. No field survey for paleontological resources was conducted for this project.

Paleontological Assessment Standards

The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources.²⁸ Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists and reflect the currently accepted standard practices. Many federal, state, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates the following:

- Vertebrate fossils and fossiliferous (fossil-containing) deposits are considered significant nonrenewable paleontological resources and are afforded protection by federal and state, environmental laws and guidelines.
- A paleontological resource is considered to be older than recorded history, or 5,000 years before present, and is not to be confused with an archeological resource.

²⁸ Society of Vertebrate Paleontology (SVP), *Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines*, <http://vertpaleo.org/The-Society/Statements-and-Guidelines/Conformable-Impact-Mitigation-Guidelines-Committee.aspx>, accessed on July 14, 2014.

- Invertebrate fossils are not significant paleontological resources unless they are present within an assemblage of vertebrate fossils or they provide undiscovered information on the origin and character of the plant species, past climatic conditions, or the age of the rock unit itself.
- A project paleontologist, special interest group, lead agency, or local government can designate certain plant or invertebrate fossils as significant.

In accordance with these principles, the SVP outlined criteria for screening the paleontological potential of rock units and established assessment and mitigation procedures tailored to such potential. **Table 3.7-1** lists the criteria for high-potential, undetermined, and low-potential rock units.

TABLE 3.7-1
CRITERIA FOR DETERMINING PALEONTOLOGICAL POTENTIAL

Paleontological Potential	Description
High	Geologic units from which vertebrate or significant invertebrate or plant fossils have been recovered in the past, or rock formations that would be lithologically and temporally suitable for the preservation of fossils. Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant. Common examples are: <ul style="list-style-type: none"> • Most tertiary-age sedimentary rocks, especially fine-grained, low energy deposits such as shale and mudstone. • Pleistocene-age alluvial fans, lake/playa deposits, shallow marine deposits and marine terraces
Undetermined	Geologic units for which little to no information is available.
Low	Geologic units that are not known to have produced a substantial body of significant paleontological material, as demonstrated by paleontological literature and prior field surveys, and which are poorly represented in institutional collections. Common Examples are: <ul style="list-style-type: none"> • All intrusive igneous rocks (e.g., granites) • Most metamorphic rocks and volcanic rocks (e.g., marble, slate, schist, basalt, etc...) • Recently (i.e., within the last 10,000 years) deposited sediment (e.g., Holocene alluvium, bay muds/estuarine areas, slope wash or recent landslide deposits)

SOURCE: SVP, Policy Statements web site: <http://vertpaleo.org/The-Society/Governance-Documents/Conformable-Impact-Mitigation-Guidelines-Committee.aspx>, 2014.

Although not discussed in the SVP standards, artificial fills, surface soils, and high-grade metamorphic rocks do not contain paleontological resources. While such materials were originally derived from rocks, they have been altered, weathered, or reworked such that the discovery of intact fossils would be rare.

For the geologic units described above, the SVP criteria (described in Table 3.7-1 above) would consider the metamorphic materials to have a low potential for paleontological resources. The silty and clayey sand in the eastern portion of the site may have a potential for paleontological resources.

To further research the potential for paleontological resources, a search of the paleontological locality database of the UCMP was conducted to identify vertebrate fossil localities within San Francisco County.²⁹ The records search did not identify existing fossil localities that directly intersect the proposed project. However, the records search revealed several fossil localities in the broader region that were discovered within the same or similar geologic units that could be encountered by the proposed project. Numerous fossils have been discovered within older (generally Pleistocene-age) alluvial fan deposits and alluvium. The most common geologic units represented in UCMP collections were Tertiary-age sedimentary rock formations, which do not underlie the project site. However, some fossils have been identified in Pleistocene Alluvium and Early Pleistocene to Holocene Alluvium, including vertebrates (ground sloths, mammoths, horses, mastodons, and llamas), invertebrates (snails, bivalves [e.g., mussels and clams], ammonites, urchins, hydrozoans, and stony corals) and plants (castor oil and pine trees).

In accordance with SVP criteria for assigning paleontological potential ratings to rock units, both Pleistocene Alluvium and Early Pleistocene to Holocene Alluvium would have a high paleontological potential because fossils have been recovered from them in the past. Based on the descriptions provided above, the eastern portion of the C-APE is considered to have a high potential for paleontological resources.

²⁹ University of California Museum of Paleontology (UCMP). Collections Database Search Results. Accessed Online March, 2013 at <http://www.ucmp.berkeley.edu/science/collections.php>.

3.8 Transportation and Circulation

This section describes existing conditions related to transportation and circulation. The project site is located in the Visitacion Valley neighborhood of San Francisco (see Figure 1-1), and is generally bounded by Hahn Street to the east, Velasco Avenue to the south, and McLaren Park to the north and west. The extent of the study area includes Sunnydale Avenue to the north, Geneva Avenue to the south, Hahn Street to the east, and Brookdale Avenue to west, and all streets within these boundaries. Intersections selected for analysis include primary intersections within the study area, as well as primary intersections along Sunnydale Avenue, Geneva Avenue, and Bayshore Boulevard near the project site.¹

3.8.1 Environmental Setting

The following describes the existing roadway system in the vicinity of the proposed project, including roadway designation, number of lanes, and traffic flow directions.

Regional Roadway Facilities

U.S. Highway 101 (U.S. 101) is a north-south freeway spanning much of the length of California. It extends north across the Golden Gate Bridge to Marin County and the Pacific Northwest. It extends south to San Jose and Los Angeles. It is primarily an eight-lane freeway south of Interstate 80 and along the Peninsula. Access to and from the project site from U.S. 101 southbound is provided via an off-ramp at Bayshore Boulevard located approximately 1.5 miles east of the project site, and the access to/from U.S. 101 northbound is provided via an on/off-ramp at Lagoon Road located approximately 3 miles southeast of the project site.

Interstate 280 (I-280) is a north-south freeway that extends between San Francisco and San Jose. In the vicinity of the project site, it is an eight-lane freeway. Access from and to the I-280 northbound and southbound are provided via on- and off-ramps at Geneva Avenue located approximately 2 miles west of the project site.

Local Roadway Facilities

Bayshore Boulevard is a two-way north-south street that generally parallels U.S. 101, originating in San Francisco and extending to Airport Boulevard in South San Francisco. Bayshore Boulevard is generally a four-lane roadway with two lanes in each direction. The Muni light rail service (T Third line) operates in the median between Hester Avenue and Sunnydale Avenue. Bayshore Boulevard is approximately 100 feet wide and has 13-foot sidewalks in the vicinity of the project site. The *San Francisco General Plan* identifies Bayshore Boulevard as a Major Arterial Street, part of the Metropolitan Transportation System (MTS) and Congestion Management Program (CMP) Networks, and a Transit Preferential Street, and a Neighborhood Commercial Street. Bayshore

¹ This section was prepared on the basis of the *Sunnydale-Velasco HOPE SF Final Transportation Impact Study* (CHS Consulting, March 2013), included in **Appendix TR** to this Draft EIR/EIS.

Boulevard is part of Bicycle Routes 25 and 5. In the vicinity of the project site, the segment south of Sunnydale Avenue is under the jurisdictions of Daly City and Brisbane.

Geneva Avenue is a major east-west roadway that extends between Phelan Avenue and Bayshore Boulevard. West of Phelan Avenue, Geneva Avenue continues to Highway 1 as Ocean Avenue. East of Bayshore Boulevard, Geneva Avenue is an unpaved dead-end roadway. Geneva Avenue is generally a four-lane roadway with two lanes in each direction. In the vicinity of the project site, Geneva Avenue is approximately 86 feet wide and has on-street parking on both sides of the street. The *San Francisco General Plan* designates Geneva Avenue as a Major Arterial Street, part of MTS and CMP Networks, and as a Transit Preferential Street and Neighborhood Commercial Street between Phelan Avenue and Santos Street. In the vicinity of the project site, the segment east of Santos Street is under the jurisdiction of Daly City.

Sunnydale Avenue is a two-way east-west street between Persia Avenue and Bayshore Boulevard. East of Bayshore Boulevard, Sunnydale Avenue continues approximately 260 feet to a dead end. Sunnydale Avenue is a two-lane roadway with one lane in each direction and has on-street parking on both sides of the street. The street is approximately 36 feet wide, including curbside parking. The *San Francisco General Plan* identifies Sunnydale Avenue as a Transit Preferential Street and a Neighborhood Commercial Street between Santos Street and Hahn Street.

Visitacion Avenue is a two-way street between Mansell Street and Bayshore Boulevard. Visitacion Avenue runs in the north-south direction between Mansell Street and Hahn Street and in the east-west direction between Hahn Street and Bayshore Boulevard. Visitacion Avenue is a two-lane roadway with one lane in each direction and has on-street parking on both sides of the street. The street is approximately 38 feet wide. The *San Francisco General Plan* designates Visitacion Avenue as a Transit Preferential Street and Neighborhood Commercial Street between Hahn Street and Bayshore Boulevard.

Blythedale Avenue is a two-way, two-lane east-west street between Brookdale Avenue and Hahn Street. The street is approximately 35 feet wide, including curbside parking, and has on-street parking on both sides of the street.

Brookdale Avenue is a two-way, two-lane street that extends from Geneva Avenue to Santos Street. The street is approximately 33 feet wide, including curbside parking, and has on-street parking on both sides of the street.

Calgary Street is a block-long, two-lane two-way north-south street between Velasco Avenue and Geneva Avenue. North of Velasco Avenue, Calgary Street extends to Raymond Avenue as Sawyer Street. The street is approximately 34 feet wide and has on-street parking on both sides of the street.

Carrizal Street is a block-long two-way, two-lane street between Velasco Avenue and Geneva Avenue. The street is approximately 35 feet wide and has on-street parking on both sides of the street.

Castillo Street is a block-long two-way, two-lane street between Velasco Avenue and Geneva Avenue. The street is approximately 35 feet wide and has on-street parking on both sides of the street.

Hahn Street is a two-way, two-lane north-south street that extends from Leland Avenue to Sunrise Way. The street is approximately 45 feet wide and has on-street parking on both sides of the street. The *San Francisco General Plan* identifies Hahn Street as a Transit Preferential Street and a Neighborhood Commercial Street between Sunnydale Avenue and Visitacion Avenue.

Pasadena Street is a two-way, two-lane street that extends from Geneva Avenue to the cul-de-sac, approximately 435 feet north. The street is approximately 34 feet wide and has on-street parking on both sides of the street.

Persia Avenue is a two-way, two-lane east-west street between Sunnydale Avenue and Ocean Avenue. The street is approximately 36 feet wide and has on-street parking on both sides of the street.

Pueblo Street is a block-long two-way, two-lane street between Velasco Avenue and Geneva Avenue. The street is approximately 35 feet wide and has on-street parking on both sides of the street.

Santos Street is a two-way, two-lane north-south street between Sunnydale Avenue and Geneva Avenue. The street is approximately 40 feet wide and has on-street parking on both sides of the street. The *San Francisco General Plan* identifies Santos Street as a Transit Preferential Street and a Neighborhood Commercial Street between Geneva Avenue and Sunnydale Avenue.

Sawyer Street is a two-way, two-lane north-south street that extends from Raymond Avenue to Velasco Avenue. South of Velasco Avenue, Sawyer Street extends to Geneva Avenue as Calgary Street. The street is approximately 36 feet wide and has on-street parking on both sides of the street.

Schwerin Street is a two-way, two-lane north-south street that extends from Leland Avenue to Linda Vista Drive. The street is approximately 40 feet wide and has on-street parking on both sides of the street. In the vicinity of the project site, the segment south of Velasco Avenue is under the jurisdiction of Daly City.

Sunrise Way is a two-way, two-lane east-west street between Hahn Street and Sawyer Street that forms cul-de-sacs at both ends of the street. The street is approximately 36 feet wide and has on-street parking on both sides of the street.

Velasco Avenue is a two-way, two-lane east-west street between Carrizal Street and Schwerin Street. The street is approximately 34 feet wide and has on-street parking on both sides of the street.

3.8.2 Existing Traffic Volumes and Levels of Service

Existing traffic conditions at 12 study intersections were evaluated for the peak hour within the weekday p.m. peak period (4:00 p.m. to 6:00 p.m.). Peak hours for each intersection differ from each other, but the peak traffic hour is generally 5:00 p.m. to 6:00 p.m. Traffic counts for all the study intersections were conducted on Tuesday, August 31, 2010, during the p.m. peak period. The two-hour intersection turning movement counts, existing lane configuration and peak-hour turning movements for the study intersections are presented in the transportation impact study (see **Appendix TR**).

Traffic operating characteristics of intersections are described by the concept of level of service (LOS). LOS is a qualitative description of an intersection's performance based on the average delay per vehicle, ranging 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. LOS A, B, C, and D are considered excellent to satisfactory service levels, while LOS E is undesirable and LOS F is unacceptable. The average control vehicle delay for signalized and unsignalized intersections and corresponding LOS designations are shown in **Table 3.8-1**.

Study Intersections

The following 12 intersections were analyzed in terms of intersection LOS during the weekday p.m. peak period (4:00 p.m. to 6:00 p.m.):

1. Sunnydale Avenue/ Persia Avenue
2. Sunnydale Avenue/ Sawyer Street
3. Sunnydale Avenue/ Schwerin Street
4. Sunnydale Avenue/ Bayshore Boulevard
5. Sunnydale Avenue/ Santos Street
6. Geneva Avenue/ Brookdale Avenue
7. Geneva Avenue/ Santos Street
8. Geneva Avenue/ Calgary Street
9. Geneva Avenue/ Schwerin Street
10. Geneva Avenue/ Bayshore Boulevard
11. Visitacion Avenue/ Bayshore Boulevard
12. Velasco Avenue/ Santos Street

The intersections were evaluated using the 2000 *Highway Capacity Manual* operations methodology. This method determines the capacity for each lane group approaching the intersection. LOS is then based on the average stopped delay per vehicle (seconds per vehicle) for the various movements within the intersection. **Table 3.8-2** presents the LOS and delay data for the study intersections under the existing conditions. It shows that all of the study intersections currently operate satisfactorily at LOS C or better.

**TABLE 3.8-1
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

Unsignalized Intersections		Level of Service Grade	Signalized Intersections	
Description	Average Total Vehicle Delay (Seconds)		Average Control Vehicle Delay (Seconds)	Description
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

SOURCE: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, updated 2000.

**TABLE 3.8-2
EXISTING INTERSECTION LEVELS OF SERVICE (LOS)
WEEKDAY PM PEAK HOUR**

Intersection	Control Type^a	LOS^a	Delay
1. Sunnydale Avenue/ Persia Avenue	SSSC	B (NB)	13.2
2. Sunnydale Avenue/Sawyer Street	AWSC	A (EB)	8.2
3. Sunnydale Avenue/Schwerin Street	AWSC	A (WB)	9.9
4. Sunnydale Avenue/Bayshore Boulevard	Signalized	C	20.2
5. Sunnydale Avenue/Santos Street	AWSC	A (WB)	8.3
6. Geneva Avenue/Brookdale Avenue	SSSC	C (SB)	21.9
7. Geneva Avenue/Santos Street	Signalized	B	19.9
8. Geneva Avenue/Calgary Street	SSSC	C (SB)	22.3
9. Geneva Avenue/Scherwin Street	Signalized	B	16.6
10. Geneva Avenue/Bayshore Boulevard	Signalized	C	23.2
11. Visitacion Avenue/Bayshore Boulevard	Signalized	B	14.0
12. Velasco Avenue/Santos Street	AWSC	A (SB)	7.9

^a SSSC indicates a Side-Street Stop-Controlled intersection and AWSC indicates an All-Way Stop-Controlled intersection; for SSSC and AWSC intersections, LOS and delay is presented for the worst approach (i.e., the approach with the highest delay), indicated in parenthesis (i.e., NB = Northbound; SB = Southbound; EB = Eastbound; and WB = Westbound).

SOURCE: CHS Consulting Group, March 2013.

Site Access

The primary access routes to the project site would remain along Sunnydale Avenue, Santos Street and Brookdale Avenue. However, the Proposed Project would change the existing street layout in the project site (see Figure 2-3 in Chapter 2). The proposed project would realign Sunnydale Avenue, Brookdale Avenue, Blythedale Avenue, and Santos Street. Brookdale Avenue would be extended northward to connect to Sunnydale Avenue, and its east-west segment would be replaced by Center Street, which ends at the west side of the proposed Mid-Terrace Park and continues on the east side of the park. Blythedale Avenue would be straightened and extended north via "A" Street to Hahn Street. As a result, five new streets (on Center Street, "A", "B", "C", and "D" Streets²) and 12 new additional intersections would be created in the project site. The primary access routes to the project site, as described above, would remain. The existing traffic calming elements at the intersection of Sunnydale Avenue and Santos Street would be removed as part of the street reconfiguration, and new streets would have bulb-outs (extension of a corner sidewalk at an intersection) and stop-signs at all intersections. All streets are proposed as public streets and would be maintained by the City.

² Street names would need to conform to the City system and be approved by the City.

3.8.3 Existing Transit Network

This section describes the existing transit network in the vicinity of the proposed project. Primary public transit service to the study area is provided by the San Francisco Municipal Railway (Muni). In addition, the San Mateo County Transit District (SamTrans) and Caltrain provide a bus and a heavy rail service in the area, respectively.

San Francisco Municipal Railway

Muni operates buses, cable cars, and light rail services within the City and County of San Francisco. There are four Muni bus routes (8X, 8BX, 9, 56) that traverse (or run adjacent to) the project site and one light rail service (T Third) that has a stop approximately 0.8 mile east of the project site and can be accessed via bus or walking. In the descriptions of each line below, the Muni daily boarding data were obtained from the counts collected for the Muni Transit Effectiveness Project (TEP).³

8X Bayshore Express connects the downtown San Francisco, Fisherman's Wharf, and the City College via Visitacion Valley. Weekday service is provided from 5:30 a.m. to 12:30 a.m. at 8- to 15-minute headways. During the weekday commute hours, 8X operates in the reverse-commute direction only. This line has a daily boarding of 19,983 passengers, of which approximately 1,736 passengers board within the study area. During the p.m. peak hour, the maximum passenger load within the study area is approximately 410 passengers.

8BX Bayshore "B" Express connects the downtown San Francisco and the Visitacion Valley area. 8BX operates only in the peak direction during weekday peak hours at 8-minute headways. The inbound service is provided from 6:30 a.m. to 9:00 a.m., and the outbound service is provided from 3:30 p.m. to 6:45 p.m. This line has a daily boarding of 3,985 passengers, of which approximately 410 passengers board within the study area. During the p.m. peak hour, the maximum passenger load within the study area is approximately 213 passengers.

9 San Bruno connects downtown San Francisco and the Visitacion Valley area via Bayshore Boulevard, Potrero Avenue, 11th Street, and Market Street. Weekday service is provided from 5:30 a.m. to 1:00 a.m. at 12- to 20-minute headways. This line has a daily boarding of 15,060 passengers, of which approximately 540 passengers board within the study area. During the p.m. peak hour, the maximum passenger load within the study area is approximately 98 passengers in the inbound direction and eight passengers in the outbound direction.

56 Rutland is a community route that serves the Visitacion Valley area. This route operates between Thomas Mellon Drive and Executive Park Boulevard, and Visitacion Valley Middle School via Blanken Street, Bayshore Boulevard, Wilde, Rutland, Raymond, and Visitacion Avenue. This line has a daily boarding of 218 passengers, of which approximately 20 passengers board within the study area. During the p.m. peak hour, the maximum passenger load within the study area is approximately four to seven passengers.

³ <http://www.sfmta.com/cms/rtep/tepdataindx.htm>, accessed September 27, 2010.

T Third is a light rail service that provides service to the downtown San Francisco and the Third Street commercial corridor. It operates along Bayshore Boulevard and terminates at the intersection of Bayshore Boulevard and Sunnydale Avenue, approximately 0.8 mile east of the project site. The service is provided from 4:45 a.m. to 12:00 a.m. at 9- to 10-minute headways throughout the day. This line has a daily boarding of 32,746 passengers, of which approximately 1,013 passengers board at the Sunnydale Station. During the p.m. peak hour, the maximum passenger load at the Sunnydale Station is approximately 34 passengers.

Muni Transit Effectiveness Project

The Transit Effective Project (TEP) presents a thorough review of San Francisco's public transit system, initiated by SFMTA in collaboration with the City Controller's Office. The TEP is aimed at improving reliability, reducing travel times, providing more frequent service and updating Muni bus routes and rail lines to better match current travel patterns. The Final EIR was certified by the San Francisco Planning Commission on March 27, 2014. The SFMTA approved the TEP on March 28, 2014. The TEP components will be implemented based on funding and resource availability, and it is anticipated that the first group of service improvements would be implemented in Fiscal Year 2015 and the second group in a subsequent phase.⁴ Transit Effectiveness Project recommendations include new routes and route realignments, more service on busy routes, and elimination or consolidation of certain routes or route segments with low ridership. The following changes are proposed by the TEP for routes in the study area.

8X Bayshore Express

- Travel time reduction proposal (TTRP) improvements⁵ along Stockton Street, Kearny Street, San Bruno Avenue, Silver Street, and Geneva Avenue would improve travel time and reliability for customers and contribute to increasing the operating speed of the network. These improvements would include transit signal priority or optimized signal timing, stop spacing optimization, bus bulbs, dedicated transit lane, ticket vending machines, all door boarding, and customer amenities.
- More frequent service would shorten wait times and reduce crowding.
- Temporary reroute in the southbound direction along Mason and Fifth streets to accommodate the Central Subway Project construction.

8BX Bayshore "B" Express

- TTRP improvements along Stockton Street, Kearny Street, San Bruno Avenue, Silver Street, and Geneva Avenue would improve travel time and reliability for customers and contribute to increasing the operating speed of the network. These improvements would include transit signal priority or optimized signal timing, stop spacing optimization, bus bulbs, dedicated transit lane, ticket vending machines, all door boarding, and customer amenities.

⁴ San Francisco Planning Department, Transit Effectiveness Project Draft EIR, July 10, 2013, Case No. 2011.0558E.

⁵ TTRP improvements include traffic engineering changes, stop spacing optimization and customer amenity improvements along corridor segments of the TEP-recommended rapid route network.

- Segment north of Broadway would be eliminated and be replaced by the planned 11 Downtown Connector.
- Temporary reroute in the southbound direction along Mason and Fifth streets to accommodate the Central Subway Project construction. The reroute is expected to be in place for several years.

9 San Bruno

- TTRP improvements along Silver Avenue, San Bruno Avenue, 11th Street, Potrero Avenue, and Bayshore Boulevard would improve travel time and reliability for customers and contribute to increasing the operating speed of the network. These improvements would include transit signal priority or optimized signal timing, stop spacing optimization, bus bulbs, a dedicated transit lane, ticket vending machines, all door boarding, and customer amenities.

56 Rutland

- No changes are being pursued.

The TEP provides the most recent available Muni ridership data for the bus routes operating in the vicinity of the project site. Route capacity utilization (number of passengers as a percentage of vehicle capacity) was determined at the Maximum Load Point, which is the location where the route has its highest number of passengers. Muni's established capacity utilization standard for peak period operations is 85 percent. It should be noted that the 85 percent utilization is of seated and standing loads, so at 85 percent all seats are taken, and there are many standees. During the weekday a.m. and p.m. peak hours, none of the lines in the vicinity of the project site operate at or above the capacity utilization standard of 85 percent, with the exception of the T Third Light Rail, which operates at 97 percent capacity utilization at the maximum load point of Church/Market Streets during the a.m. peak hour and operates at 90 percent capacity utilization at the maximum load point at the Van Ness Muni Metro station during the p.m. peak hour.

Regional Transit System

While the local transit service to and from the project site is provided by Muni bus routes, these services can be used to access regional transit operators including SamTrans, Bay Area Rapid Transit (BART) and Caltrain. Three screenlines (East Bay, North Bay, and South Bay) have been established to evaluate regional transit operations into and out of San Francisco. The East Bay screenline is operated by BART, AC Transit and ferries (i.e., Alameda/Oakland ferry, Harbor Bay ferry, Vallejo Baylink), the North Bay screenline is operated by Golden Gate Transit Bus and ferries (i.e., Golden Gate ferry, Tiburon ferry), and the South Bay screenline is operated by BART, Caltrain, and SamTrans.

SamTrans provides bus service within San Mateo County, as well as between San Mateo County and parts of San Francisco and Palo Alto. SamTrans operates one bus route in the vicinity of the project site. Route 24 connects Daly City and Brisbane via Geneva Avenue and Bayshore Boulevard (south of Geneva Avenue). The nearest bus stop is located at the intersection of Geneva Avenue and Santos Street, one block south from the southern border of the project site. Service is provided twice a day, each in the a.m. and p.m. peak periods.

BART operates regional rail transit service between the East Bay (from Pittsburg/Bay Point, Richmond, Dublin/Pleasanton, and Fremont) and San Francisco, and between northern San Mateo County (Daly City, San Francisco Airport, and Millbrae) and San Francisco. During the p.m. peak period, headways are generally 5 to 15 minutes for each line. The closest station to the project site is the Balboa Park Station on Geneva Avenue, located approximately 2 miles west of the project site. Connection to the BART station from the project site is provided by Muni bus routes 8X and 8BX. BART has a daily boarding of approximately 414,900 passengers system-wide, of which approximately 10,900 use the Balboa Park Station.⁶

Caltrain provides rail passenger service on the Peninsula between Gilroy and San Francisco. The Peninsula Corridor Joint Powers Board (JPB)--a joint powers agency consisting of San Francisco, San Mateo, and Santa Clara Counties--operates the service. The closest station is Bayshore Station located on Tunnel Avenue approximately 1 mile east of the project site. Caltrain currently operates local train service to the Bayshore Station at approximately one-hour headways during the a.m. and p.m. peak periods. There is a limited local transit connections from the project site to the Bayshore Station. The closest local transit stop to the station is served by Muni bus route 56 Rutland at the intersection of Blanken Street and Tunnel Street, approximately 900 feet north of the station. Caltrain has an average of 52,600 weekday passengers system wide, of which 250 passengers use the Bayshore Station.⁷

Based on existing ridership levels and capacity of regional transit providers, at regional screenlines all operators currently operate with ridership lower than their load factor standards (i.e., a one-hour load factor of 135 percent for BART and a one-hour load factor of 100 percent for all other providers), which indicates that seats generally are available.

3.8.4 Existing Pedestrian Conditions

Sidewalks are generally 6 to 9 feet in width (with the exception of 13-foot-wide sidewalks along Bayshore Boulevard) and all streets within the study area have sidewalks. Field observation shows that pedestrian traffic in the study area is generally light to moderate and is easily accommodated by the sidewalks and crosswalks in the area. The TIS prepared for the project found that pedestrian traffic mainly occurs near the intersection of Hahn Street and Sunnydale Avenue where bus stops and a neighborhood grocery store are located. Although there are crosswalks in the majority of intersections, pedestrians were often observed to be jaywalking or crossing the intersection diagonally when traffic volumes are low, instead of using crosswalks. According to the SFMTA's *Traffic Collision History Report* for the past 10 years, a pedestrian was injured in an accident at the intersection of Geneva and Brookdale Avenues in September 2011. The collision occurred due to the right-of-way violation by the pedestrian.

⁶ BART Monthly Ridership Report for July 2014 (<http://www.bart.gov/about/reports/ridership.aspx>), accessed August 9, 2014.

⁷ Caltrain Annual Passenger Counts for February, 2104 (<http://www.caltrain.com/about/statsandreports/Ridership.html>), accessed August 9, 2014.

Pedestrian volume in the vicinity of John McLaren School, located immediately west of the northwestern project border, is relatively low during the day. The majority of students are either picked up or dropped off by their parents, or they take a school bus. The pick-up and drop-off activities occurred at the on-street white passenger loading zone in front of the school. Overall, no substantial school children traffic has been observed in the vicinity of the school or in the study area.

3.8.5 Existing Bicycle Conditions

On-street bicycle facilities include city-designated routes that are part of the San Francisco Bicycle Network. These on-street bicycle facilities are grouped into three categories:

- Class I bikeways are bike paths with exclusive right-of-way for use by bicyclists or pedestrians;
- Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles; and
- Class III bikeways are signed bike routes that allow bicycles to share travel lanes with vehicles.

Currently, there are no designated bicycle routes or lanes adjoining the project site. The closest routes are Route 90 (Class III) on Geneva Avenue and Route 5 (Class II) on Bayshore Boulevard. As described below, there are other bicycle facilities near the project site, including Route 25 (Class II/III), Route 705 (Class II), and Route 905 (Class III). During the field surveys on weekday and weekend midday periods, bicycle volumes were observed to be generally low in the vicinity of the study area. There is no bicycle parking available in the project site, thus the existing tenants often store their bicycles in the front or back porch of their units.

Route 5 connects Visitacion Valley and North Beach, primarily as a Class III facility along Bayshore Boulevard, Third Street, and Illinois Street, and as a Class II facility along the Embarcadero and San Bruno Avenue. In the vicinity of the project, there are Class II bike lanes on southbound Bayshore Boulevard and Class III bike routes south of Geneva Avenue where bicyclists share the road with vehicles.

Route 25 connects Visitacion Valley and Russian Hill as a Class II or Class III facility. In the vicinity of the project site, Route 25 runs as a Class III facility along San Bruno Avenue between Mansell and Campbell Avenues and as a Class II facility between Campbell and Tunnel Avenues.

Route 90 is an east-west bikeway that connects San Francisco State University and Visitacion Valley, primarily as a Class III facility along Holloway Street and Geneva Avenue, and as a Class II facility between Brookdale Avenue and Castillo Street. It terminates at Bayshore Boulevard.

Route 705 is a Class II bikeway that runs east-west along Mansell Street between Visitacion Avenue and San Bruno Avenue.

Route 905 is a Class III bikeway that runs north-south along Tunnel Avenue.

SFMTA has plans for long-term and minor bicycle improvements in the vicinity of the project site. Long-term improvements are proposed for Route 705 on Mansell Street. This route currently ends at the intersection with Visitacion Avenue, but the long-term improvements would extend the route to Alemany Street in the west. In addition, minor improvements are proposed for Route 90 on Geneva Avenue between Moscow Street and Brookdale Avenue and for Route 25 on San Bruno Avenue between Bayshore Boulevard and Caro Street. Minor improvements would address gaps and deficiencies in the bicycle route network. Specific designs for long-term and minor improvements have not been developed yet.

3.8.6 Existing Parking Conditions

This section describes the results of a survey of existing supply and occupancy of on-street parking spaces in the project study area. No off-street parking facilities were identified in the study area except for the shared parking lots in between residential buildings and a small parking lot located behind the community center. These parking lots provide a total of 430 off-street parking spaces in the project site.

On-Street Parking Inventory and Occupancy

Field reconnaissance of existing parking supply and occupancy conditions within the vicinity of the proposed project was conducted on August 31, 2010 during the midday period from 1:30 p.m. to 3:00 p.m., and during the evening period from 6:30 p.m. to 8:00 p.m.

During the midday period, on-street parking spaces in the study area are occupied at approximately 54 percent on average, with higher occupancy along Cielito Drive and Pueblo Street at 93 and 97 percents, respectively. The on-street parking occupancy rate increased to nearly 74 percent on average during the evening period when the residents return from work, with higher occupancy along Pasadena, Castillo, and Pueblo Streets at or more than 100 percent (meaning more cars are parked on the street than standard spacing allows, and/or cars are double parked). However, these streets are outside of the project boundary, and some cars were observed to be double-parked. No double parking occurred within the project site. A detailed inventory of on-street parking supply and occupancy on a block-by-block basis is included in the transportation impact study (see **Appendix TR**).

3.9 Noise

This section includes an explanation of acoustic terms used throughout this document and a discussion of the affected noise environment for the project site and vicinity.

3.9.1 Acoustic Fundamentals

Sound is mechanical energy transmitted by pressure waves through a medium, such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Some representative noise sources and their corresponding noise levels in dBA are shown in **Table 3.9-1**.

**TABLE 3.9-1
EXAMPLE SOUND LEVELS**

Noise	dBA
Rock Band	110
Jet Fly-over at 100 feet	105
Diesel Truck going 50 mph at 50 feet	80
Noisy Urban Area during daytime	75
Gas Lawnmower at 100 feet	70
Commercial Area	65
Normal Speech at 3 feet	65
Quiet Urban Area during Daytime	50
Quiet Urban Area during Nighttime	40
Quiet Rural Area during Nighttime	25

dBA = A-weighted decibel

SOURCE: California Department of Transportation, Technical Noise Supplement, 2009.

Other noise measurements used in this section include the community noise equivalent level (CNEL), which is a measure of the average sound level over a 24-hour period, with a penalty factor of 5 dB applied to evening noise (7:00 pm to 10:00 pm) and a penalty factor of 10 dB applied to nighttime noise (10:00 pm to 7:00 am). The day-night average sound level (DNL) is similar to the CNEL in that it is a measure of the average sound level over a 24-hour period; however, a penalty factor of 10 dB is applied only to nighttime noise (10:00 pm to 7:00 am). The equivalent average sound pressure level (Leq) can be thought of as the average sound level over the period that the sound was measured, although it is not the same as an arithmetic average.

The decibel system is logarithmic in nature. The human ear perceives sound in a non-linear fashion, hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources each produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Point sources of noise, including stationary mobile sources such as idling vehicles or onsite construction equipment, attenuate (lessen) at a rate of 6.0 dBA to 7.5 dBA per doubling of distance from the source, based on the inverse square law and the equations for spherical spreading of noise waves over hard and soft surfaces. For the purposes of this analysis, it is assumed that noise from a point source to a distance of 200 feet attenuates at a rate of 6.0 dBA per doubling of distance, and the noise from a point source to a distance longer than 200 feet attenuates at a rate of 7.5 dBA per doubling of distance to account for the absorption of noise waves due to ground surfaces such as soft dirt, grass, bushes, and intervening structures¹.

3.9.2 Noise-Sensitive Land Uses

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication, and can cause physiological and psychological stress and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Places such as churches, libraries, and cemeteries, where people tend to pray, study, and/or contemplate are also sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive.

The existing 767-unit Sunnydale housing complex and the 18-unit Velasco housing complex on the project site are existing sensitive land uses. There is also a 29,500-square-foot daycare and youth program building, which would be considered a sensitive receptor with regard to daytime noise.

The closest off-site noise-sensitive receptors to the project site are one residential unit on Brookdale Avenue that abuts the southwest project boundary and four residential units west of Hahn Street that abut the eastern project boundary. Additionally there are several residential units east of

¹ Caltrans, Technical Noise Supplement (TeNS), November 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Hahn Street and south of Velasco Avenue, approximately 60 feet away. Also, the John McLaren Child Development Center, at 2055 Sunnydale Avenue, is approximately 100 feet west of the northwest project boundary.

3.9.3 Existing Noise Levels

Sound Level Measurements

Sound level measurements were collected at two locations on the project site. Both Sunnydale Avenue and Santos Street are designated transit corridors within the project site with active diesel bus routes that operate into the nighttime hours and are expected to have the highest noise levels. Consequently, 24-hour (long-term) sound level measurements were collected at a 30-foot setback from the center of these roadways, commensurate with the existing and proposed building setbacks. Monitored noise levels are presented in **Table 3.9-2**. These measurements capture all noise sources in the area, inclusive of roadway traffic, transit bus noise (with airbrakes), aircraft noise, pedestrian noise, sirens etc. Monitored sound levels indicate a noise environment along Sunnydale Avenue that is considered normally acceptable for existing residential uses by HUD and conditionally acceptable by the City of San Francisco *General Plan* Environmental Protection Element. Monitored sound levels indicate a noise environment along Santos Street that is considered normally unacceptable for existing residential uses by HUD and by the City of San Francisco *General Plan* Noise Element.

TABLE 3.9-2
LONG-TERM NOISE MEASUREMENTS COLLECTED IN THE STUDY AREA

Site No.	Measurement Location	Daytime Leq	Nighttime Leq	DNL	Predominant Noise Sources
L-1	Sunnydale Avenue between Hahn Street and Santos Street.	64	56	65	Passenger vehicle and Transit buses (Routes 8X and 8BX).
L-2	Santos Street between Velasco Avenue and Blythedale Avenue.	74	62	74	Passenger vehicles and Transit buses (Routes 8X, 8BX and 9).

NOTE: Measurements were collected on April 24, 2013.

Calculated Sound Levels

Airport Noise

San Francisco International Airport is approximately 6 miles south and Oakland International Airport is approximately 10 miles east of the project site. The project site is outside the 55 dB CNEL noise contour of both airports.²

² San Francisco International Airport, Aircraft Noise Abatement Office, Mapping Tools, Internet Web Site: http://www.flyquietsfo.com/mapping_tools.asp, Accessed April 30, 2013, and Oakland International Airport, Fourth Quarter 2008 Noise Contours. Internet website: http://www2.oaklandairport.com/noise/pdfs/2008_Annual_Noise_Contour_Map.pdf, accessed April 30, 2013.

Arterial Roadway Noise

According to the City's *General Plan* Transportation Element Vehicular Street Map (Map 6) and downloadable geographic information system data, Geneva Avenue is the only street within 1,000 feet of the project site that is classified as a major arterial.³ Geneva Avenue is approximately 630 feet southeast of the project site. Geneva Avenue is separated from the project site by approximately 17 row house structures, which serve to attenuate roadway noise. The City of San Francisco Department of Public Health has prepared a noise exposure map for most roadways throughout the City.⁴ This map indicates that traffic noise from along Geneva Avenue is reduced to 55 dBA, DNL, or less several hundred feet south of the project site.⁵

Traffic noise levels along Sunnydale Avenue, which runs through the project site, are indicated in the City's *General Plan* traffic noise map to be as high as 70 dBA, DNL. No other roadways within 1,000 feet of the project site are shown to contribute 50 dBA, DNL or greater to the project site. Therefore a Noise Assessment pursuant to the direction of HUD's *Noise Guidebook* was conducted for locations at varying distances from Sunnydale Avenue.

The transportation study for the proposed project indicates that Sunnydale Avenue has existing peak hour volumes of 212 vehicles which, using the industry standard average of 10 percent of daily, results in average daily traffic (ADT) of 2,120 between Hahn Street and Santos Street. The weekday frequency of the two bus lines (8X and 8BX) indicates that 215 of these daily trips are SF MUNI buses that the HUD Noise Assessment Guidelines categorizes as "heavy trucks." Using the HUD's *Day/Night Noise Level Assessment Tool*, these volumes translate to noise levels of 73 DNL at 30 feet from the roadway center, the approximate setback of the closest existing residences on the project site. This modeled noise level is 8 dBA greater than the monitored value presented in Table 3.9-2.

Although not indicated on the *General Plan* Background Noise Levels map⁶ as a noise impacted roadway, Santos Street has three bus lines in operation and is designated as a Transit Preferential Street. The transportation study for the proposed project indicates that Santos Street has existing peak hour volumes of 195 vehicles which, using the industry standard average of 10 percent of daily, results in average daily traffic (ADT) of 1,950 between Velasco Avenue and Blythedale Avenue. The weekday frequency of the three bus lines (8X, 8BX and 9) indicates that 373 of these daily trips are SF MUNI buses (which, as indicated above, the HUD Noise Assessment Guidelines categorizes as "heavy trucks"). Using the HUD's *Day/Night Noise Level Assessment Tool*, these volumes translate to a roadway noise level of 75 DNL at 30 feet from the roadway center, the approximate setback of the closest existing residences on the project site. This modeled noise level is within 1 dBA of the monitored value presented in Table 3.9-2.

³ San Francisco Planning Department, Map 6 Vehicular Street Map. From the *San Francisco General Plan*, Transportation Element, Internet website: http://www.sf-planning.org/ftp/general_plan/images/I4.transportation/tra_map6.pdf, accessed April 30, 2013.

⁴ San Francisco Department of Public Health, Noise Enforcement Program, Background Noise Level Map, 2009. Available at <http://www.sfdph.org/dph/eh/Noise/>.

⁵ San Francisco General Plan, *San Francisco General Plan* Environmental Protection Element, Map 1, Background Noise Levels, 2009.

⁶ *Ibid.*

Rail Noise

The Third Street light rail is approximately 3,500 feet east of the project site, and Caltrain is approximately 4,200 feet east of the project site. Because these railways are farther than 3,000 feet, their potential contribution to noise at the project site need not be assessed per HUD's Noise Assessment Guidelines.⁷

Combined Noise Levels

There would be no meaningful contribution from either aircraft or rail noise sources per HUD guidance because of the substantial distances of these sources from the project site. Furthermore, based on site visits, there are no other noise sources in the area that need be considered.⁸ Consequently, the combined noise level would be equivalent to the roadway noise levels described above.

⁷ HUD, The Noise Guidebook. Environmental Planning Division, Office of Environment and Energy; September 1991.

⁸ Environmental Science Associates visited the site on Friday, March 21, 2014, from approximately 4:00 p.m. until 5:00 p.m.

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3.10 Air Quality

3.10.1 Introduction

This section discusses the existing air quality conditions in the project site vicinity, presents the regulatory framework for air quality management, and analyzes the potential for the proposed project to affect existing air quality conditions, both regionally and locally, due to activities that emit criteria and non-criteria air pollutants. It also analyzes the types and quantities of emissions that would be generated on a temporary basis due to proposed construction activities as well as those generated over the long term due to proposed operation of project elements. The analysis determines whether those emissions are significant in relation to applicable air quality standards and identifies feasible mitigation measures for significant adverse impacts. The section also includes an analysis of cumulative air quality impacts. Emissions of greenhouse gases resulting from the proposed project's potential impacts on climate change and the state's goals for greenhouse gas emissions pursuant to Assembly Bill 32 are presented and discussed in Section 4.11, Greenhouse Gas Emissions.

The analysis in this section is based on a review of existing air quality conditions in the region and air quality regulations administered by the United States Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the Bay Area Air Quality Management District (BAAQMD). This analysis includes methodologies identified in the updated BAAQMD *CEQA Air Quality Guidelines* (May 2012).

3.10.2 Setting

Climate and Meteorology

The project site is located within the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB's moderate climate steers storm tracks away from the region for much of the year, although storms generally affect the region from November through April. San Francisco's proximity to the onshore breezes stimulated by the Pacific Ocean provide for generally good air quality in the project site vicinity.

Temperatures in the project site vicinity average in the mid-50s annually, generally ranging from the low 40s on winter mornings to mid-70s during summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby San Francisco Bay. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the "rainy" period from November through April. Precipitation may vary widely from year to year as a shift in the annual storm track of a few hundred miles can mean the difference between a wet year and drought conditions.

Atmospheric conditions--such as wind speed, wind direction, and air temperature gradients--interact with the physical features of the landscape to determine the movement and dispersal of air pollutants regionally. The project site lies within the Peninsula climatological subregion. Marine air traveling through the Golden Gate is a dominant weather factor affecting dispersal of air pollutants

within the region. Wind measurements collected on the San Francisco mainland indicate a prevailing wind direction from the west and an average annual wind speed of 10.6 miles per hour.¹ Increased temperatures create the conditions in which ozone formation can increase.

Ambient Air Quality – Criteria Air Pollutants

As required by the 1970 federal Clean Air Act, the United States Environmental Protection Agency (USEPA) initially identified six criteria air pollutants that are pervasive in urban environments and for which state and federal health-based ambient air quality standards have been established. USEPA calls these pollutants “criteria air pollutants” because the agency has regulated them by developing specific public-health-based and welfare-based criteria as the basis for setting permissible levels. Ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead are the six criteria air pollutants originally identified by USEPA. Since that time, subsets of particulate matter have been identified for which permissible levels have been established. These include particulate matter of 10 microns in diameter or less (PM₁₀) and particulate matter of 2.5 microns in diameter or less (PM_{2.5}).

BAAQMD is the regional agency with jurisdiction for regulating air quality within the nine-county SFBAAB. The region’s air quality monitoring network provides information on ambient concentrations of criteria air pollutants at various locations in the San Francisco Bay Area.

Table 3.10-1 presents a five-year summary for the period 2009 to 2013 of the highest annual criteria air pollutant concentrations, collected at the air quality monitoring station operated and maintained by BAAQMD at 16th and Arkansas Streets, in San Francisco’s lower Potrero Hill area, which is the closest monitoring station to the project site. Table 3.10-1 also compares measured pollutant concentrations with the most stringent applicable ambient air quality standards (state or federal). Concentrations shown in bold indicate an exceedance of the standard. Table 3.10-1 does not include SO₂ because monitors are not required for the Bay Area as SFBAAB has never been designated as non-attainment for SO₂ and there are no prominent SO₂ sources, such as refineries, in the San Francisco area.

Ozone

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

¹ Western Regional Climate Center, Prevailing Wind Directions, web site: <http://www.wrcc.dri.edu/htmlfiles/westwinddir.html#CALIFORNIA>, accessed on February 19, 2014.

TABLE 3.10-1
SUMMARY OF SAN FRANCISCO AIR QUALITY MONITORING DATA (2009–2013)

Pollutant ^f	Most Stringent Applicable Standard	Number of Days Standards Were Exceeded and Maximum Concentrations Measured ^a				
		2009	2010	2011	2012	2013
Ozone						
- Days 1-Hour Standard Exceeded		0	0	0	0	0
- Maximum 1-Hour Concentration (pphm)	>9 pphm ^b	7	8	7	7	7
- Days 8-Hour Standard Exceeded		0	0	0	0	0
- Maximum 8-Hour Concentration (pphm)	>7 pphm ^c	6	5	5	5	6
Carbon Monoxide (CO)						
- Days 1-Hour Standard Exceeded		0	0	0	0	0
- Maximum 1-Hour Concentration (ppm)	>20 ppm ^b	4.3	1.8	1.8	2.0	1.8
- Days 8-Hour Standard Exceeded		0	0	0	0	0
- Maximum 8-Hour Concentration (ppm)	>9 ppm ^b	2.9	1.4	1.2	1.2	1.4
Suspended Particulates (PM₁₀)						
- Days 24-Hour Standard Exceeded ^d		0	0	0	1	0
- Maximum 24-Hour Concentration (µg/m ³)	>50 µg/m ³ ^b	36	40	46	51	44
Suspended Particulates (PM_{2.5})						
- Days 24-Hour Standard Exceeded ^e		1	3	2	1	2
- Maximum 24-Hour Concentration (µg/m ³)	>35 µg/m ³ ^c	36	45	47	36	49
- Annual Average (µg/m ³)	>12 µg/m ³ ^b	9.7	10.5	9.5	8.2	10.1
Nitrogen Dioxide (NO₂)						
- Days 1-Hour Standard Exceeded		0	0	0	1	0
- Maximum 1-Hour Concentration (pphm)	>10 pphm ^c	6	9	9	12	7

NOTES:

Bold values are in excess of applicable standard.

ppm = parts per million; pphm = parts per hundred million; ppb=parts per billion

µg/m³ = micrograms per cubic meter

^a Number of days exceeded is for all days in a given year, except for particulate matter. PM₁₀ and PM_{2.5} are monitored every six days and therefore the number of days exceeded is out of approximately 60 annual samples.

^b State standard, not to be exceeded.

^c Federal standard, not to be exceeded.

^d Based on a sampling schedule of one out of every six days, for a total of approximately 60 samples per year.

^e Federal standard was reduced from 65 µg/m³ to 35 µg/m³ in 2006.

^f Sulfur dioxide monitoring was terminated in 2009.

SOURCE: BAAQMD, Bay Area Air Pollution Summary, 2009 – 2013. Available online at: <http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx>.

Table 3.10-1 shows that, according to published data, the most stringent applicable standards (state 1-hour standard of 9 parts per hundred million [pphm] and the federal 8-hour standard of 8 pphm) were not exceeded in San Francisco between 2009 and 2013. Measurements of ozone indicate hourly maximums ranging between 78 to 89 percent of the state standard, and maximum 8-hour ozone levels that are approximately 71 to 86 percent of the more stringent federal 8-hour standard.

Carbon Monoxide (CO)

CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles; the highest emissions occur during low travel speeds, stop-and-go driving, cold starts, and hard acceleration. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue; impair central nervous system function; and induce angina (chest pain) in persons with serious heart disease. Very high levels of CO can be fatal. As shown in Table 3.10-1, the more stringent state CO standards were not exceeded between 2009 and 2013. Measurements of CO indicate hourly maximums ranging between 9 to 22 percent of the more stringent state standard, and maximum 8-hour CO levels that are approximately 13 to 32 percent of the allowable 8-hour standard.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from man-made and natural sources. Particulate matter regulated by the state and federal Clean Air Acts is measured in two size ranges: PM₁₀ for particles less than 10 microns in diameter, and PM_{2.5} for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about one-half of the SFBAAB's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the CARB, studies in the United States and elsewhere "have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks," and studies of children's health in California have demonstrated that particle pollution "may significantly reduce lung function growth in children." CARB also reports that statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.² Among the criteria pollutants that are regulated, particulates appear to represent a serious ongoing health hazard. As long ago as 1999, BAAQMD was reporting, in its *CEQA Air Quality Guidelines*, that studies had shown that elevated particulate levels contribute to the death of approximately 200 to 500 people per year in the Bay Area. High levels of particulate matter can exacerbate chronic respiratory ailments, such as bronchitis and asthma, and have been associated with increased emergency room visits and hospital admissions.

Table 3.10-1 shows that an exceedance of the state PM₁₀ standard occurred on one monitored occasion between 2009 and 2013 in San Francisco. It is estimated that the state 24-hour PM₁₀ standard of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) was exceeded on up to 6 days per year

² California Air Resources, Board, "Recent Research Findings: Health Effects of Particulate Matter and Ozone Air Pollution," November 2007. A copy of this document is available for public review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0903E.

between 2009 and 2013.³ BAAQMD began monitoring PM_{2.5} concentrations in San Francisco in 2002. The federal 24-hour PM_{2.5} standard was not exceeded until 2006, when the standard was lowered from 65 µg/m³ to 35 µg/m³. It is estimated that the state 24-hour PM_{2.5} standard was exceeded on up to 54 days per year between 2009 and 2013.³ The state annual average standard was not exceeded between 2009 and 2013.

PM_{2.5} is of particular concern because 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.⁴

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO₂. Aside from its contribution to ozone formation, NO₂ can increase the risk of acute and chronic respiratory disease and reduce visibility. NO₂ may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. In 2010, USEPA implemented a new 1-hour NO₂ standard presented in **Table 3.10-2**. Currently, the CARB is recommending that the SFBAAB be designated as an attainment area for the new standard.⁵ Table 3.10-1 shows that this new federal standard was exceeded on one day at the San Francisco station between 2009 and 2013.

USEPA has also established requirements for a new monitoring network to measure NO₂ concentrations near major roadways in urban areas with a population of 500,000 or more. Sixteen new near-roadway monitoring sites are required in California, three of which will be in the Bay Area. These monitors are planned for Berkeley, Oakland, and San Jose. The Oakland station commenced operation in February 2014, and the other two were expected to be operational by January 2015. The new monitoring data may result in a need to change area designations in the future. CARB will revise the area designation recommendations, as appropriate, once the new monitoring data become available.

Sulfur Dioxide (SO₂)

SO₂ is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO₂ has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute

³ PM₁₀ and PM_{2.5} are sampled every sixth day; therefore, actual days over the standard can be estimated to be six times the numbers listed in the table.

⁴ San Francisco Department of Public Health, Assessment and Mitigation of Air Pollutant Health Effect from Intra-urban Roadways: Guidance for Land Use Planning and Environmental Review, May 2008, p. 7. Available online at <http://www.sfdph.org/dph/EH/Air/default.asp>. Accessed April 15, 2013.

⁵ CARB, Recommended Area Designations for the 2010 Nitrogen Dioxide Standards, Technical Support Document, January 2011, http://www.airquality.org/plans/federal/no2/NO2Enclosure_1.pdf

TABLE 3.10-2
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS

Pollutant	Averaging Time	State (SAAQS ^a)		Federal (NAAQS ^b)	
		Standard	Attainment Status	Standard	Attainment Status
Ozone	1 hour	0.09 ppm	N	NA	See Note c
	8 hour	0.07 ppm	U ^d	0.075 ppm	N/Marginal
Carbon Monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hour	9 ppm	A	9 ppm	A
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	A	0.100 ppm	U
	Annual	0.030 ppm	NA	0.053 ppm	A
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	A	0.075	A
	24 hour	0.04 ppm	A	0.14	A
	Annual	NA	NA	0.03 ppm	A
Particulate Matter (PM ₁₀)	24 hour	50 µg/m ³	N	150 µg/m ³	U
	Annual ^e	20 µg/m ³ ^f	N	NA	NA
Fine Particulate Matter (PM _{2.5})	24 hour	NA	NA	35 µg/m ³	N
	Annual	12 µg/m ³	N	15 µg/m ³	A
Sulfates	24 hour	25 µg/m ³	A	NA	NA
Lead	30 day	1.5 µg/m ³	A	NA	NA
	Cal. Quarter	NA	NA	1.5 µg/m ³	A
Hydrogen Sulfide	1 hour	0.03 ppm	U	NA	NA
Visibility-Reducing Particles	8 hour	See Note g	A	NA	NA

NOTES:

A = Attainment; N = Nonattainment; U = Unclassified; NA = Not Applicable, no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter.

^a 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 0.08 ppm or less. The 24-hour PM₁₀ standard is attained when the three-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour PM_{2.5} standard is attained when the three-year average of the 98th percentile is less than the standard.

^c The United States Environmental Protection Agency (USEPA) 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 State standard = annual geometric mean; national standard = annual arithmetic mean.

^f In June 2002, The California Air Resources Board (CARB) established new annual standards for PM_{2.5} and PM₁₀.

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

SOURCE: Bay Area Air Quality Management District (BAAQMD), Standards and Attainment Status, 2012a, http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed April 19, 2013; and USEPA National Ambient Air Quality Standards, 2011, <http://www.epa.gov/air/criteria.html>, accessed April 19, 2013.

and chronic respiratory disease.^{6,7} Sulfur dioxide monitoring was terminated at the San Francisco station in 2009. Table 3.10-2 shows that the state standard for SO₂ is being met in the Bay Area, and pollutant trends suggest that the SFBAAB will continue to meet this standard for the foreseeable future.

In 2010, the USEPA implemented a new 1-hour SO₂ standard presented in Table 4.2-2. The USEPA has initially designated the SFBAAB as an attainment area for SO₂. Similar to the new federal standard for NO₂, the USEPA has established requirements for a new monitoring network to measure SO₂ concentrations⁸). No additional SO₂ monitors are required for the Bay Area because BAAQMD jurisdiction has never been designated as non-attainment for SO₂ and no State Implementation Plan (SIP) or maintenance plans have been prepared for SO₂.⁹

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses, cars), smelters (metal refineries), and manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has a range of adverse neurotoxic health effects, which put children at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, USEPA strengthened the national ambient air quality standard for lead by lowering it from 1.5 µg/m³ to 0.15 µg/m³. USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas resulting in an increase in 76 monitors nationally.¹⁰

Fugitive Dust

Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust.¹¹ Individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.¹² BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.¹³ The City of San Francisco's Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008, which amended the San Francisco

⁶ BAAQMD, *CEQA Guidelines*, p. B-2.

⁷ BAAQMD, *CEQA Air Quality Guidelines*, May 2011, <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx>; p. C-16.

⁸ U.S. EPA, Fact Sheet: Revisions to the Primary National Ambient Air Quality Standard, Monitoring Network, and Data Reporting Requirements for Sulfur Dioxide, <http://www.epa.gov/air/sulfurdioxide/pdfs/20100602fs.pdf>

⁹ BAAQMD, *2012 Air Monitoring Network Plan*, July 2013, [www.baaqmd.gov/Divisions/](http://www.baaqmd.gov/Divisions/Technical-Services/Ambient-Air-Monitoring/AAMN-Plan.aspx)

[Technical-Services/Ambient-Air-Monitoring/AAMN-Plan.aspx](http://www.baaqmd.gov/Divisions/Technical-Services/Ambient-Air-Monitoring/AAMN-Plan.aspx); p. 30

¹⁰ USEPA, Fact Sheet Revisions to Lead Ambient Air Quality Monitoring Requirements, http://www.epa.gov/air/lead/pdfs/Leadmonitoring_FS.pdf, accessed March 3, 2011.

¹¹ Western Regional Air Partnership. 2006. *WRAP Fugitive Dust Handbook*. September 7, 2006. This document is available online at http://www.wrapair.org/forums/dej/f/fdh/content/FDHandbook_Rev_06.pdf, accessed February 16, 2012.

¹² BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 27.

¹³ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

Building Code and added Article 22B to the *San Francisco Health Code*) requires a number of fugitive dust control measures to ensure that construction projects do not result in visible dust. The BMPs employed in compliance with the City of San Francisco's Construction Dust Control Ordinance is an effective strategy for controlling construction-related fugitive dust.

Toxic Air Contaminants and Local Health Risks and Hazards

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long-duration) and acute (i.e., severe but of short-term) adverse effects to human health, including carcinogenic effects. Human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but instead are regulated by BAAQMD using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.¹⁴

Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 70 years. Therefore, assessments of air pollutant exposure to residents typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter (PM_{2.5}) are strongly associated with mortality, respiratory diseases, and reductions in lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.¹⁵ In addition to PM_{2.5}, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (ARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.¹⁶ The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, San Francisco partnered with BAAQMD to inventory and assess air pollution and exposures from mobile, stationary, and area sources within San Francisco. Areas with poor air quality,

¹⁴ In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

¹⁵ SFDPH, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review*, May 2008.

¹⁶ California Air Resources Board (ARB), Fact Sheet, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," October 1998.

termed “Air Pollutant Exposure Zones,” were identified based on two health-protective criteria: (1) excess cancer risk greater than 100 per one million population from the contribution of emissions from all modeled sources, and/or (2) cumulative PM_{2.5} concentrations greater than 10 micrograms per cubic meter (µg/m³). Locations were identified based on modeling that was prepared using a 20 meter by 20 meter receptor grid covering the entire City and County of San Francisco. The proposed project is not located within an Air Pollutant Exposure Zone.

Excess Cancer Risk

The above 100 per one million persons exposed (100 excess cancer risk) criterion is based on USEPA guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.¹⁷ As described by the BAAQMD, the USEPA considers a cancer risk of 100 per million to be within the “acceptable” range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,¹⁸ USEPA states that it “...strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.” The 100 per one million excess cancer risk is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.¹⁹

In addition to monitoring criteria pollutants, both the BAAQMD and CARB operate TAC monitoring networks in the SFBAAB. These stations measure 10 to 15 TACs, depending on the specific station. The TACs selected for monitoring are those that have traditionally been found in the highest concentrations in ambient air and therefore tend to produce the most significant risk. The nearest BAAQMD ambient TAC monitoring station to the project site is the station at 16th and Arkansas Streets in San Francisco. **Table 3.10-3** shows ambient concentrations of carcinogenic TACs measured at the Arkansas Street station, as well as the estimated cancer risks from a lifetime exposure (70 years) to these substances. When TAC measurements at this station are compared to ambient concentrations of various TACs for the Bay Area as a whole, the cancer risks associated with mean TAC concentrations in San Francisco are similar to those for the Bay Area as a whole. Therefore, the estimated average lifetime cancer risk resulting from exposure to TAC concentrations monitored at the San Francisco station do not appear to be any greater than for the Bay Area as a region.

¹⁷ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 67.

¹⁸ 54 Federal Register 38044, September 14, 1989.

¹⁹ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 67.

**TABLE 3.10-3
ANNUAL AVERAGE AMBIENT CONCENTRATIONS OF CARCINOGENIC TOXIC
AIR CONTAMINANTS MEASURED AT BAAQMD MONITORING STATION IN 2012,
10 ARKANSAS STREET, SAN FRANCISCO**

Substance	Concentration	Cancer Risk per Million ^a
Gaseous TACs	<i>(ppb)</i>	
Acetaldehyde	0.50	2
Benzene	0.20	19
1,3-Butadiene	0.034	13
Carbon Tetrachloride	0.082	22
Formaldehyde	1.01	7
Perchloroethylene	0.010	0.4
Methylene Chloride	0.087	0.3
Chloroform	0.018	0.5
Trichloroethylene	0.01	0.1
Particulate TACs	<i>(ng/m³)</i>	
Chromium (Hexavalent)	0.065	10
Total Risk for All TACs		74.3

NOTES:

TACs = toxic air contaminants; BAAQMD = Bay Area Air Quality Management District; ppb = part per billion; ng/m³ = nanograms per cubic meter.

^a Cancer risks were estimated by applying published unit risk values to the measured concentrations.

SOURCE: California Air Resources Board, *Ambient Air Toxics Summary-2012*, available online at: <http://www.arb.ca.gov/adam/toxics/sitesubstance.html>

Roadway-Related Pollutants

Motor vehicles are responsible for a large share of air pollution, especially in California. Vehicle tailpipe emissions contain diverse forms of particles and gases and 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 conducted in conjunction with epidemiologic studies has confirmed that roadway-related health effects vary with modeled 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.²⁰ In 2008, the City of San Francisco adopted amendments to the *Health Code* (discussed below under “Regulatory Framework”), requiring new residential projects near high-volume roadways to be screened for particulate matter exposure hazards and, where indicated, to conduct an analysis of exposure and to address hazards through design and ventilation.

²⁰ California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005 (hereinafter “ARB Air Quality and Land Use Handbook”). Available at <http://www.arb.ca.gov/ch/handbook.pdf>.

Diesel Particulate Matter (DPM)

CARB identified DPM as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Mobile sources, such as trucks and buses, are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways. CARB estimated average Bay Area cancer risk from exposure to diesel particulate, based on a population-weighted average ambient diesel particulate concentration, is about 480 in one million, as of 2000, which is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. The statewide risk from DPM as determined by CARB declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, CARB estimated the average statewide cancer risk from DPM at 540 in one million.^{21,22}

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines. Subsequent CARB regulations apply to new trucks and diesel fuel. With new controls and fuel requirements, 60 trucks built in 2007 would have the same particulate exhaust emissions as one truck built in 1988.²³ The regulation is anticipated to result in an 80-percent decrease in statewide diesel health risk in 2020 as compared with the diesel risk in 2000. Despite notable emission reductions, CARB recommends that proximity to sources of DPM emissions be considered in the siting of new sensitive land uses. CARB notes that these recommendations are advisory and should not be interpreted as defined “buffer zones,” and that local agencies must balance other considerations, including transportation needs, the benefits of urban infill, community economic development priorities, and other quality of life issues. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk where necessary, CARB’s position is that infill development, mixed use, higher density, transit-oriented development, and other concepts that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level.²⁴

Fine Particulate Matter

In April 2011, USEPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*. In this document, USEPA staff concludes that the current federal annual PM_{2.5} standard of 15 µg/m³ should be revised to a level within the range of 13 to 11 µg/m³, with evidence strongly supporting a standard within the range of 12 to 11 µg/m³. The Air

²¹ CARB, *California Almanac of Emissions and Air Quality - 2009 Edition*, Table 5-44 and Figure 5-12, <http://www.arb.ca.gov/aqd/almanac/almanac09/chap509.htm>, accessed July 9, 2014.

²² This calculated cancer risk value from ambient air exposure in the Bay Area can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is more than 40 percent (based on a sampling of 17 regions nationwide), or greater than 400,000 in one million, according to the American Cancer Society. (American Cancer Society, “Lifetime Probability of Developing or Dying from Cancer,” last revised July 13, 2009, available online at http://www.cancer.org/docroot/CRI/content/CRI_2_6x_Lifetime_Probability_of_Developing_or_Dying_From_Cancer.asp)

²³ Pollution Engineering, *New Clean Diesel Fuel Rules Start*. July, 2006 Available online at

<http://www.pollutionengineering.com/articles/85480-new-clean-diesel-fuel-rules-start> Accessed July 9, 2014.

²⁴ California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005 (hereinafter “ARB Air Quality and Land Use Handbook”). Available at <http://www.arb.ca.gov/ch/handbook.pdf>.

Pollutant Exposure Zone for San Francisco is based on the health protective PM_{2.5} standard of 11 µg/m³, as supported by the USEPA's Particulate Matter Policy Assessment, although lowered to 10 µg/m³ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Land use projects within the Air Pollutant Exposure Zone require special consideration to determine whether the project's activities would expose sensitive receptors to substantial air pollutant concentrations or add emissions to areas already adversely affected by poor air quality.

Sensitive Receptors

BAAQMD defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, colleges and universities, day care, hospitals, and senior-care facilities. Workers are not considered sensitive receptors because all employers must follow regulations set forth by the Occupation Safety and Health Administration (OSHA) to ensure the health and well-being of their employees.²⁵

The proximity of sensitive receptors to motor vehicles is an air pollution concern, especially in San Francisco where building setbacks are limited and roadway volumes are higher than most other parts of the Bay Area. Existing sensitive receptors include existing residential units on the project site in the Phase 2 and Phase 3 areas that would be present during construction of Phase 1 of the proposed project; those in the Phase 3 area would also be present during Phase 2 construction. The closest existing off-site sensitive receptors to the project site consist of one residential unit on Brookdale Avenue that abuts the southwest project boundary and four residential units on the west side of Hahn Street that abut the eastern project boundary, as do the westernmost dwellings on the south side of Sunrise Way and on the north side of Velasco Avenue. Additionally residential units line the east side of Hahn Street and the south side of Velasco Avenue, and are approximately 60 feet from the project site. A review of the State Community Care Licensing Division database revealed that there are two existing child care facilities on the project site: the Willie Brown Youth Center at 1652 Sunnydale Avenue that would be demolished in Phase 1 of construction, and the Wu Yee Children's Service at 700 Velasco Avenue that would be demolished in Phase 3 of construction. There is one other existing facility within 1,000 feet of the project site: the John McLaren Child Development Center at 2055 Sunnydale Avenue, approximately 100 feet west of the northwest project boundary.

Sensitive receptors to be located on the project site would consist of the residences in newly constructed dwelling units. Additionally, Building 1 in Figure 2 would be a community center that would offer recreational opportunities for the community, including small children, and would include replacement of the existing child care facilities. There would be no dedicated schools as part of the proposed project.

²⁵ BAAQMD, Recommended Methods for Screening and Modeling Local Risks and Hazards, May 2011, page 12.

Existing Stationary Sources of Air Pollution

BAAQMD's inventory of permitted stationary sources of emissions show one permitted stationary emission sources present within or near the 1,000-foot zone of influence of the project site. This permitted facility is a stationary diesel engine for a back-up power generator at 2600 Geneva Avenue, which is for emergency use only. BAAQMD's database indicates that maintenance operations of this generator contribute no meaningful increased cancer risks at the property line of the facility.

Major Roadways Contributing to Air Pollution

BAAQMD guidance indicates that roadways with volumes exceeding 10,000 average annual daily traffic (AADT) should be considered with regard to their impact to the siting of new sensitive receptors if within 1,000 feet of any receptor. This traffic contributes to elevated concentrations of PM_{2.5}, DPM, and other contaminants emitted from motor vehicles near the street level. A review of 2average daily roadway volumes from the SF CHAMP model indicates that Geneva Avenue is the only roadway within the 1,000-foot zone of influence that exceeds 10,000 vehicles per day. A single segment of Sunnysdale Avenue that exceeds 10,000 vehicles per day is beyond the 1,000-foot zone of influence.

Geneva Avenue has an existing average daily roadway volume of 21,199 vehicles and may be expected to have a relatively high truck percentage due to its role as a major east-west arterial street. Other roadways considered for their contribution to localized health risks and hazards due solely on their proximity in and around the Project site include Brookdale Avenue, Sunnysdale Avenue and Santos Street.

Aside from the surrounding major roadways, no other areas of mobile-source activity or otherwise "non-permitted" sources (e.g., railyards, trucking distribution facilities, and high-volume fueling stations) are located within 1,000 feet of the project site.

The City of San Francisco, in conjunction with BAAQMD has recently completed a City wide Health Risk Assessment that evaluates cumulative cancer risks and PM_{2.5} concentrations from existing stationary and mobile sources. This Assessment indicates that the existing lifetime cancer risks on the project site range from 3.4 in one million to 35.7 in one million. Existing localized annual PM_{2.5} concentrations on the project site range from 8.1 to 8.6 micrograms per cubic meter.

Odor Emissions

There are no significant odor sources in the vicinity of the project site. BAAQMD identifies odor sources to include such land uses as wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants.

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3.11 Greenhouse Gas Emissions

3.11.1 Setting

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs contributes to global climate change. The primary GHGs are carbon dioxide (CO₂), black carbon, methane (CH₄), nitrous oxide (N₂O), ozone, and water vapor.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operational phases. While the presence of the primary GHGs in the atmosphere is naturally occurring, CO₂, CH₄, and N₂O are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Black carbon has emerged as a major contributor to global climate change, possibly second only to CO₂. Black carbon is produced naturally and by human activities as a result of the incomplete combustion of fossil fuels, biofuels and biomass.¹ N₂O is a byproduct of various industrial processes. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. GHGs are typically reported in "carbon dioxide-equivalent" measures (CO₂E).²

There is international scientific consensus that human-caused increases in GHGs contribute to climate change. Many impacts resulting from climate change, including sea level rise, increased fires, floods, severe storms and heat waves, already occur and will only become more severe and costly.³ Secondary effects of climate change likely include impacts to agriculture, the state's electricity system, and native freshwater fish ecosystems, an increase in the vulnerability of levees such as in the Sacramento-San Joaquin Delta, changes in disease vectors, and changes in habitat and biodiversity.^{4,5}

¹ Center for Climate and Energy Solutions. "What is Black Carbon?", April 2010. Available online at: <http://www.c2es.org/docUploads/what-is-black-carbon.pdf>. Accessed September 27, 2012.

² Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

³ California Climate Change Portal. Available online at: <http://www.climatechange.ca.gov>. Accessed September 25, 2012. Cubasch, U., D. Wuebbles, D. Chen, M.C. Facchini, D. Frame, N. Mahowald, and J.-G. Winther, 2013: Introduction. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Available online at: http://www.climatechange2013.org/images/report/WG1AR5_Chapter01_FINAL.pdf. Accessed May 9, 2014.

⁴ *Ibid*, California Climate Change Portal.

⁵ California Energy Commission. California Climate Change Center. Our Changing Climate 2012. Available online at: <http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>. Accessed August 21, 2012.

Greenhouse Gas Emission Estimates and Energy Providers in California

The California Air Resources Board (ARB) estimated that in 2010 California produced about 451.60 million gross metric tons of CO₂E (million MTCO₂E).⁶ The ARB found that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state generation and imported electricity) at 21 percent and industrial sources at 19 percent. Commercial and residential fuel use (primarily for heating) accounted for 10 percent of GHG emissions.⁷ In San Francisco, motorized transportation and natural gas sectors were the two largest sources of GHG emissions, accounting for approximately 40 percent (2.1 million MTCO₂E) and 29 percent (1.5 million MTCO₂E) respectively, of San Francisco's 5.3 million MTCO₂E emitted in 2010.⁸ Electricity consumption (building operations and transit) accounts for approximately 25 percent (1.3 million MTCO₂E) of San Francisco's GHG emissions.⁹

Electricity in San Francisco is primarily provided by PG&E and the San Francisco Public Utilities Commission (SFPUC). In 2010, electricity consumption in San Francisco was approximately 6.1 million megawatt-hours (MWh). Of this total, PG&E produces approximately 73 percent of electricity distributed (4.5 million MWh; about 79 percent of San Francisco's electricity-driven GHG emissions) and the SFPUC produces approximately 14 percent of electricity distributed (0.9 million MWh; about 0.01 percent of San Francisco's electricity-driven GHG emissions).¹⁰

The majority of land use projects in San Francisco are provided power by PG&E, whose 2010 power mix was as follows: 20 percent natural gas, 24 percent nuclear, 16 percent eligible renewables (described below), 16 percent large hydroelectric, 23 percent unspecified power, one percent coal, and one percent other fossil fuels.^{11,12}

Muni, city buildings, and a limited number of other commercial accounts in San Francisco are provided energy by the SFPUC who operates three hydroelectric power plants in association with San Francisco's Hetch Hetchy water supply and distribution system. This system has the lowest GHG emissions of any large electric utility in California.¹³

⁶ California Air Resources Board (ARB), "California Greenhouse Gas Inventory for 2000-2010— by Category as Defined in the Scoping Plan." Available online at: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-10_2013-02-19.pdf. Accessed June 5, 2013.

⁷ *Ibid.*

⁸ San Francisco Department of Environment (DOE), *San Francisco Climate Action Strategy, 2013 Update*.

⁹ *Ibid.*

¹⁰ *Ibid.* Note: the remainder of the electricity consumption is derived from third party generators or other suppliers.

¹¹ Pacific Gas & Electric (PG&E), "PG&E's 2010 Electric Power Mix Delivered to Retail Customers." Available online at: <http://www.pge.com/myhome/edusafety/systemworks/electric/energymix/>. Accessed June 10, 2013 (2013a).

¹² Pending California Public Utilities Commission approval, PG&E would include a "Green Option" program that would allow customers an opportunity to pay into a program that may lead to the development of up to 250 MW of new clean energy projects in the PG&E service area. See PG&E, "New Green Option (Community Solar) FAQ." Available online at: <http://www.pge.com/about/environment/pge/greenoption/faq/>. Accessed June 10, 2013 (2013b).

¹³ San Francisco Public Utilities Commission (SFPUC), "Agenda Item No 20, Adopt an Enforcement Program as required under the California Renewable Energy Resources Act," December 13, 2011. Available online at: http://www.energy.ca.gov/portfolio/rps_pou_reports.html. Accessed June 10, 2013.

3.12 Wind and Shadow

3.12.1 Wind

A difference in atmospheric pressure between two points on the earth will cause an air mass to move from the area of higher pressure toward the area of lower pressure. The movement of an air mass results in wind. As an air mass moves, it interacts with the surface of the earth; the interaction slows the layer of air that is next to the surface and creates turbulence. The slower-moving air near the surface, in turn, slows the next layer of moving air just above it. The turbulence propagates upward, with the result that higher wind velocities are associated with locations higher above the surface. Smooth surfaces, such as flat open ground or water bodies, do not slow the wind nearly as much as rough surfaces, such as the mix of two and three-story buildings and landscaping in an urban development.

Project Site Wind Conditions

Based on wind speed measurements from both Downtown San Francisco and the San Francisco International Airport, over the course of a year the average wind speeds in San Francisco are the highest in the summer and lowest in winter. Over the course of a day, the highest average wind speeds in the area occur in mid-afternoon and the lowest occur in the early morning. Westerly to northwesterly winds are the most frequent and strongest winds during all seasons.

Both the speed and the turbulence of the winds that reach the project site are affected by the topography and features of the lands upwind. Winds moving over San Francisco encounter differing levels of surface roughness and take on differing wind speed profiles due to differing topography, vegetation, and structures that all act to slow the wind near the ground.

Westerly to northwesterly winds approach the project site over McLaren Park. Given the park's topography, winds are expected to be strongest at or near the park's peak at the 525-foot high Visitacion Knob. At the site's location on the east side of the hill, the project would not be exposed to these expected higher speed winds. The park's topography and mature trees, as well as existing buildings on the project site, create a surface roughness that further reduces wind speeds at the project site. The existing buildings are one or two stories tall and widely spaced.

Existing wind speeds at the project site have not been quantified, but are expected to be strong enough to be considered windy. The San Francisco Public Utilities Commission (SFPUC) wind monitoring station at Visitacion Valley Middle School (450 Raymond Avenue), which is one-quarter mile northeast of the project site, indicates that average wind speeds were 6.4 miles per hour (mph) in 2012. At the monitoring station, about 29 percent of wind speed measurements exceeded the 11 mph pedestrian comfort criterion of Section 148 of the San Francisco *Planning Code*. It is not expected that wind hazards (per Section 148) would occur at the site, given that the existing buildings on the project site are not tall enough to redirect high-level winds to the ground.¹

¹ San Francisco Public Utilities Commission (SFPUC), San Francisco 2012 Wind Monitoring Data, available online: <http://datasf.org/story.php?title=san-francisco-wind-monitoring-data-2>, accessed July 31, 2013.

3.12.2 Shadow

As described in Section 3.13, the project site abuts McLaren Park to the north, which features the Herz Playground, the Tennis Complex, Louis Sutter Playground, and the Gleneagles Golf Course. Other nearby open spaces include Visitacion Valley Playground, Kellogg-Velasco Park, and Crocker Amazon Playground, and the San Francisco Unified School District's John McLaren Early Education Center. Only Gleneagles Golf Course, Herz Playground, and the Early Education Center are in close enough proximity to the project site to be affected by shadow from existing buildings.

- The Gleneagles Golf Course is located directly north of the project site. Adjacent to the project site, mature trees line the golf course and provide a buffer between the property line and the fairways.
- Herz Playground is directly north of the Sunnydale-Velasco project site, at the corner of Visitacion Avenue and Hahn Street. It includes the indoor Coffman Pool, full-size basketball courts, a soccer field, a baseball diamond, and a large play area. Similar to the trees at Gleneagles Golf Course, mature trees line the southern edge of Herz Playground, adjacent to the project site.
- The Early Education Center is located directly west of the project site, on the south side of Sunnydale Avenue. The facility includes play areas with lawn, foursquare courts, a baseball diamond, and playground. The Center is at a slightly higher elevation than the project site.

On the project site itself are a basketball court, a playground at the teen center, a playground at the community center courtyard, a playground at upper Sunnydale Avenue, and a playground mid-block on Santos Avenue. A community garden is located on the site, as well. The residential front and back yards are semi-public open spaces, but these spaces are not programmed and devoid of ornamental vegetation.²

The project site buildings are all less than three stories tall. They cast shadow onto the unprogrammed open spaces between the existing buildings. Project buildings located along the project site's northern edge, adjacent to McLaren Park, are predominantly oriented perpendicular to the southern edge of the park. These buildings cast fingers of shadow northward at mid-day, and this shadow extends into McLaren Park during the late fall / early winter months, as well as during late afternoon / early evening hours near the spring and autumn solstice.

Given the large size of McLaren Park, at 317 acres, the Planning Department determined that the quantitative analysis of net new project shadow should focus on the two park features directly adjacent to the project site, Gleneagles Golf Course and Herz Playground, to better represent the shadow effects within the context of what features would actually be shaded by the proposed project.

² Van Meter Williams Pollack, *A New Sunnydale: Existing Conditions Analysis: Draft*, prepared for Mercy Housing and The Related Companies, April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Gleneagles Golf Course is 2,657,091 square feet, and it has 9,888,098,793 square foot hours of Theoretically Available Annual Sunlight ("TAAS"), which is the amount of sunlight theoretically available on the open space, annually, during the hours subject to Section 295, if there were no shadows from existing or proposed buildings, structures, or vegetation. Under existing conditions, the golf course is sunny during the day throughout the year, with only minimal shade from structures or topography³ present in the early morning hours, within the first 15 minutes after Sunrise +1 hour (the first Section 295 minute) from about mid-March to early September. Starting in mid-September, shade is present in the final 15 minutes before Sunset -1 hour (the last Section 295 minute), and shade in the morning is no longer present. The afternoon and early evening shade increases in duration and extent approaching the winter solstice, when it reaches maximum extent at 10,151 square feet at Sunset -1 hour. The existing shadow on the golf course comprises about 356,336 square foot hours annually, or 0.0036 percent (36 thousandths of 1 percent) of TAAS.⁴

Herz Playground is 265,203 square feet and it has 986,925,625 square foot hours of TAAS. Under existing conditions, the playground is primarily sunny throughout the day throughout the year. It is partially shaded by the Coffman Pool house and the restroom building, particularly in the morning hours until about 11:00 a.m. all year, when this shadow is cast southwestward and then westward as the morning progresses. This shadow decreases in extent throughout the day, and in the afternoon and evening this shadow is cast eastward, toward Hahn Street and Visitacion Avenue. Existing shadow is at its maximum extent at 54,892 square feet on June 14th / June 28th at Sunrise +1 hour. The existing shadow on the playground comprises about 44,985,889 square foot hours annually, or 4.56 percent of TAAS.^{5,6}

³ Vegetation, including mature trees, is not considered in the shadow analysis because it changes over time naturally.

⁴ ESA, Memorandum to San Francisco Planning Department, Sunnydale-Velasco HOPE-SF Master Plan project -- Project-Specific CEQA and Sections 146, 147, and 295 Shadow Analysis, October 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ Shadow from park structures themselves is discussed here; however, such shadow is exempt from Section 295 controls.

⁶ *Ibid.*

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3.13 Recreation

3.13.1 City and Neighborhood Resources

As of 2014, the City of San Francisco had 5,890 acres of open space, 3,433 acres of land within the jurisdiction of the San Francisco Recreation and Parks Department (SFRPD). Fully 20 percent of the City's total land area comprises publicly owned open space.¹ The Visitacion Valley neighborhood had 299 acres of open spaces, comprising 31.5 percent of the geographic area of neighborhood properties.²

The nearest public open space to the project site is McLaren Park, directly to the north. This 317-acre park's varied topography provides expansive views of the City in several directions. The park includes recreational amenities surrounding three primary areas--Herz Playground, the Tennis Complex, and the Louis Sutter Playground--as well as Gleneagles Golf Course:

- Herz Playground is directly north of the Sunnydale-Velasco project site, at the corner of Visitacion Avenue and Hahn Street. It includes the indoor Coffman Pool, two full-size basketball courts, a soccer field, a baseball diamond, and a large play area.
- The Tennis Complex is located on the crest of the park, at Mansell Street and Visitacion Avenue, about half a mile northeast of the project site. The complex includes six tennis courts.
- Louis Sutter Playground is about 0.65 miles north of the project site. It provides a community clubhouse, two baseball diamonds, two tennis courts, a basketball court, two play areas, a junior soccer field, and picnic tables. Lake McNab is a decorative water feature at this location.
- The nine-hole Gleneagles Golf Course is located directly north of the project site.

McLaren Park also provides a network of 7 miles of paved and unpaved trails for hiking, biking, and jogging; an additional two half-size basketball courts; an irrigation reservoir; and 75 additional picnic tables for group picnics. SFRPD and the local community have created a plan to modify Mansell Street, which traverses the park from east to west, by implementing crosswalks, bike lanes, sidewalks, and other street design changes. The project has received grant funding and is anticipated to be under construction in 2015.³ Additionally, SFRPD is working with local groups, including SF Urban Riders, to fund and develop a bicycle skills area (bike park, for mountain biking) on an undeveloped and largely unplanted area immediately on the north side of Sunnydale Avenue immediately west of the project site. The Recreation and Park Commission approved a Community Opportunity Fund grant, providing partial funding for the bike park, on February 21, 2013.

¹ San Francisco Planning Department, *General Plan: Recreation & Open Space Element: Final Draft*, March 2014.

² San Francisco Department of Public Health (SFDPH), Urban Health and Sustainability Indicators, available online: <http://www.sustainablesf.org/indicators/view/8>, accessed March 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ SFRPD, McLaren Park: Mansell Corridor Improvements, available online: <http://sfrecpark.org/project/mclaren-mansell-project/>, accessed December 2, 2013.

Other nearby parks are as follows:

- Visitacion Valley Playground is 0.3 miles east of the project site. It contains a children's playground and baseball diamond.
- Kellogg-Velasco Park is 0.2 miles east of the project site, and it provides two tennis courts, a playground and passive recreation areas.
- Crocker Amazon Playground is 0.3 miles west of the project site, on the other side of McLaren Park. It includes five baseball diamonds, three tennis courts, five soccer fields, a football field, two basketball courts, two playgrounds, two bocce courts, a skateboard park, an open grassy field, and a multi-purpose hardscape area.

3.13.2 Project Site

There are five defined recreational areas within the project site: a basketball court, a playground at teen center, a playground at the community center courtyard, a playground at upper Sunnydale Avenue, and a playground mid-block on Santos Avenue. A community garden is located on the site, as well. The residential front and back yards are semi-public open spaces, but these spaces are not programmed and devoid of ornamental vegetation.⁴

Indoor recreational areas within the project site comprise two Head Start childcare centers and an after school program called TURF. The TURF director is an employee of the San Francisco Recreation and Parks Department and the buildings used are owned by SFHA.

⁴ Van Meter Williams Pollack, *A New Sunnydale: Existing Conditions Analysis: Draft*, prepared for Mercy Housing and The Related Companies, April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

3.14 Utilities and Service Systems

The following section addresses the public utilities that are relevant to the Project Site. The following areas are discussed: water supply, wastewater conveyance and treatment, and solid waste collection and disposal.

3.14.1 Water

Water is provided by the San Francisco Public Utilities Commission (SFPUC), which provides both water supply and wastewater collection and treatment. On June 14, 2011, the SFPUC adopted the *2010 Urban Water Management Plan (UWMP)* for the City and County of San Francisco.¹ The UWMP includes county-wide demand projections to the year 2035, compares available water supplies to meet demands, and presents water demand management measures to reduce long-term water demand. In March 2013, SFPUC updated citywide water supply and demand projections with the *2013 Water Supply Availability Study (WSA)*.² The SFPUC updated forecasts for future water demand using new growth projections prepared by the Planning Department in response to the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) Bay Area Sustainable Communities Strategy “Jobs-Housing Connections Scenario.” This update was released in 2012, and was the basis of the growth projections underlying the adopted *Plan Bay Area*, the region’s integrated land use and transportation plan. According to the WSA, 2015 available water supply will be 83.5 million gallons per day (mgd). Retail water use³ will be 83.7 mgd in 2015, comprising 78.1 mgd of in-City retail and irrigation use and 5.6 mgd of suburban retail use. Total retail demand is expected to hold relatively steady, to 83.4 mgd in 2020 and 84.2 mgd in 2035. Decreased water use is forecast for residential customers primarily due to market penetration of current plumbing codes over time. However, the growth in business and industry is expected to generate increased demand, even with implementation of plumbing requirements and conservation measures.⁴ The SFPUC plans to augment local supplies by extracting up to 4 mgd of groundwater from new wells in the City’s Westside Basin, as well as 1.5 mgd of recycled water from new recycled water projects. Total retail supply is expected to increase to 88.8 mgd by 2035.⁵

According to the WSA, the SFPUC can meet the current and future demand in years of average or above-average precipitation. It can also meet future water demand in single-dry-year and multiple-dry-year events, with the exception of 2015. Under the Water Shortage Allocation Plan (WSAP), customers would experience no reduction in regional water system deliveries within a

¹ SFPUC, *2010 Urban Water Management Plan for City and County of San Francisco*, adopted June 14, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² SFPUC, *2013 Water Availability Study for the City and County of San Francisco*, March 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ Retail water use is distinguished from wholesale use, under which the SFPUC provides potable water to other water agencies.

⁴ SFPUC, *2010 Urban Water Management Plan for City and County of San Francisco*, adopted June 14, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ SFPUC, *2013 Water Availability Study for the City and County of San Francisco*, March 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

10 percent shortage. During a 20 percent system-wide shortage, customers would experience a 1.9 percent reduction in deliveries. Retail allocations would be reduced to 79.5 mgd (98.1 percent of normal year supply), and wholesale allocations would be reduced to 132.5 mgd (72 percent of normal year supply).⁶ The ability to meet the demand of the customers is in large part due to the development of 10 mgd of local supplies in the City through implementation of the Water Supply Improvement Program (WSIP). These additional sources of groundwater, recycled water, and conservation supplies are essential to providing the City with adequate supply in dry year periods, as well as improving supply reliability during years with normal precipitation. With the WSIP in place, and the addition of local WSIP supplies, the SFPUC concluded that it has sufficient water available to serve existing customers and planned future uses.

The City maintains an Auxiliary Water Supply System (AWSS) for fire protection purposes only. One AWSS underground cistern is located at the intersection of Sunnydale Avenue and Sawyer Street, which is one block west of the project site. Cisterns in this area of the city are not connected to a distribution system, so water must be pumped from them using fire engine pumps.⁷

3.14.2 Wastewater

The SFPUC maintains and operates a combined sewer system that serves most of San Francisco. This system collects stormwater runoff and wastewater flows in the same network of pipes. It conveys flows to facilities where they are treated prior to discharge through outfalls into the Bay or Pacific Ocean. Discharges are regulated under National Pollutant Discharge Elimination System (NPDES) permits from the California Regional Water Quality Control Board, San Francisco Bay Region.

The collection system consists of about 976 miles of underground pipes throughout the city, which is divided into an eastern and western basin. The project site lies in the eastern basin, where average dry weather flows of 63 mgd are directed to the Southeast Water Pollution Control Plant (SEWPCP) located on Phelps Street, south of Islais Creek on the eastern waterfront. Dry weather flows receive secondary treatment and are discharged into the Bay through the Pier 80 outfall, which has a capacity of 110 mgd.

During wet weather, up to 150 mgd of wet weather flows receive secondary treatment at the SEWPCP. The SEWPCP can also treat up to an additional 100 mgd to a primary treatment standard plus disinfection. Treated wet weather discharges of up to 250 mgd flow through the Pier 80 outfall or through the Quint Street outfall to Islais Creek. Only wastewater treated to a secondary level is discharged at the Quint Street outfall.

Up to an additional 100 mgd of wet weather flows receive primary treatment plus disinfection at the North Point Wet Weather Facility (NPWWF), located on the north side of the City at 111 Bay

⁶ SFPUC, 2010, *Ibid.*

⁷ Metcalf & Eddy, AECOM, *Final Report: Auxiliary Water Supply System (AWSS) Study*, prepared for Capital Planning Committee, City and County of San Francisco, January 23, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Street, which operates only during wet weather. Treated effluent from this facility is discharged through four deep water outfalls, approximately 800 feet from the Bay shore. Two of the deep water outfalls terminate at the end of Pier 33 and two terminate at the end of Pier 35 on the northeastern Bay shore.⁸

The combined sewer system also includes the Bayside Wet Weather Facilities (BWVF), which consist of interconnected large underground rectangular tanks and tunnels with a series of baffles and weirs that are designed to remove settleable solids and floatables. During dry weather, the BWVFs transport combined stormwater and wastewater to the SEWPCP. During wet weather, the underground transport tunnels provide a total storage capacity of approximately 193 million gallons, while pumps continue to transfer combined wastewater and stormwater to the SEWPCP. When the combined capacity of the SEWPCP and the NPWWF is exceeded, the BWVFs retain stormwater flows for later treatment. The tanks allow floatable and settleable solid materials to be removed, similar to primary treatment processes. The materials retained in the storage and transport boxes are flushed to the treatment plants after storms.

In the event that the capacities of the SEWPCP, the NPWWF, and wet weather facilities and storage structures are exceeded, the combined stormwater and sewage, after receiving the equivalent of wet weather primary treatment in the transport structures/boxes, is discharged into San Francisco Bay through any one of the 29 shoreline combined sewer overflow (CSO) structures.⁹

The SFPUC is in the process of developing a long-term Sewer System Improvement Program to address the entire wastewater system citywide. In a parallel effort to address more immediate wastewater needs, the SFPUC in 2005 initiated a capital improvement program (CIP) to, among other things, reduce the potential for on-street flooding during heavy rains that can occur. The original CIP had 36 projects, and over time additional work was identified and funded through supplemental appropriations. As of mid-2014, the Wastewater CIP had 72 projects, \$399 million in approved budget, and an anticipated completion date of 2016.¹⁰

One such project is the Sunnydale Auxiliary Sewer Project, which will reduce localized flooding in the Visitacion Valley area during storms. Previously, wastewater and stormwater flows from a 720-acre drainage basin were conveyed by the Sunnydale Sewer Tunnel, which was a single, 6.5-foot diameter sewer pipe built in 1913.¹¹ Water was then conveyed to the Sunnydale Storage

⁸ San Francisco Public Utilities Commission (SFPUC). *Sewer System Improvement Program Report: Draft Report for SFPUC Commission Review*, prepared by Wastewater Enterprise Staff, August 10, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ This level of treatment meets the minimum treatment specified by the USEPA Combined Sewer Overflow Control Policy (CSO Policy) 150 FR 18688, April 11, 1994. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ San Francisco Public Utilities Commission, Wastewater Enterprise Capital Improvement Program, Quarterly Report, 3rd Quarter, Fiscal Year 2013-2014, May 20, 2014. Available on the SFPUC website at: <http://www.sfwater.org/modules/showdocument.aspx?documentid=5497>. Accessed October 7, 2014.

¹¹ San Francisco Public Utilities Commission, Agenda Item: Contract No. WW-487, Award, Sunnydale Auxiliary Sewer Project, August 10, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Facility and Pump Station at Harney Way on Candlestick Point. This pipe does not accommodate both wastewater and stormwater flows during larger storms.

Phase 1 of this project consisted of the construction of a new auxiliary sewer tunnel between the Sunnydale drainage basin and the Sunnydale Transport/Storage Facility located just southwest of Candlestick Park. The new sewer tunnel will increase the capacity of the sewer collection system for the Visitacion Valley District during heavy rain periods. The proposed scope of work includes installation of approximately 5,000 lf of 11.5 feet diameter sewer tunnel and 8 feet diameter tunnel from Harney Way to Schwerin Street. As of mid-2014, the contractor had completed all major construction activities and the project was in the SFPUC's "close-out" phase.¹²

Phase 2 of the project comprises construction of new sewers within the Sunnydale drainage basin, including installation of a 4-foot diameter sewer in Rutland Avenue and installation of 66-inch diameter sewer in Schwerin Street. The new sewers will connect to both the new and existing Sunnydale tunnels at Sunnydale Avenue. Construction is anticipated to begin in early 2015.¹³ This project would further reduce the backup flooding noted in the project Purpose and Need (Chapter 1). However, new drainage infrastructure would be required across the site to ensure backups no longer occur.

Additional planned construction would include construction of sewer pipelines along Talbert Street between Visitacion Avenue and the former Union Pacific railroad right-of-way, along Visitacion Avenue between Rutland Street and Talbert Street, and along the former Union Pacific right-of-way between Schwerin Street and Talbert Street. A construction schedule for this phase has not yet been finalized, but the Board of Supervisors has adopted CEQA Findings, including a mitigation monitoring and reporting program, relating to the funding and construction of this program.¹⁴

In July 2005, the SFPUC began imposing a new Wastewater Capacity Charge pursuant to SFPUC Resolution No. 05-0045. This Wastewater Capacity Charge is applicable to residential, non-residential and mixed-use types of construction that place new or additional demands on the system. All funds raised through the capacity charge will be directly used to offset the cost of future wastewater capital improvement projects and repairs.

3.14.3 Solid Waste

Recology provides collection, recycling, compost, and disposal services for the project site. San Francisco operating companies include:

¹² San Francisco Public Utilities Commission, Wastewater Enterprise Capital Improvement Program, Quarterly Report, 3rd Quarter, Fiscal Year 2013-2014, May 20, 2014. Available on the SFPUC website at: <http://www.sfwater.org/modules/showdocument.aspx?documentid=5497>. Accessed October 7, 2014.

¹³ *Ibid.*

¹⁴ San Francisco Board of Supervisors Resolution 337-10, approved July 29, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

- Recology Sunset Scavenger, which provides collection services in the residential districts of San Francisco;
- Recology Golden Gate, which provides collection services in the Financial District, North Beach, South of Market Area, and Marina; and
- Recology San Francisco, which operates the San Francisco Solid Waste Transfer and Recycling Center at 501 Tunnel Avenue, and Recycle Central on Pier 96.¹⁵

The project site is currently served by the Recology transfer station in San Francisco and the Altamont Landfill in Alameda County. San Francisco uses a three-cart collection program: residential and business customers sort solid waste into recyclables, compostable items, and garbage.

San Francisco has created the first large-scale urban program for collection of compostable materials in the country. All materials are taken to the San Francisco Solid Waste Transfer and Recycling Center. There, the three waste streams are sorted and bundled for transport to the composting and recycling facilities, and to the landfill. Food scraps, plant trimmings, soiled paper, and other compostables are turned into a nutrient-rich soil amendment or compost. Recycled materials are sent to Recycle Central, where they are separated into commodities and sold to manufacturers that turn the materials into new products.

The City of San Francisco estimates that it diverted 80 percent of its waste from landfills in 2011.¹⁶ The City's per resident disposal target rate is 6.6 pounds per person per day (PPD), and its per employee disposal target rate is 10.6 PPD. In 2011, which is the most recent date for which data are available, the measured disposal rate was 2.9 PPD for residents and 4.4 PPD for employees, thereby meeting the City's target rates.¹⁷

The portion of the City's waste that is not composted or recycled is sent to the Altamont Landfill. The Altamont Landfill has a permitted peak maximum daily disposal of 11,500 tons per day and accepted 1.06 million tons in 2009, down from 1.31 million tons in 2005. In 2013, waste contributed by San Francisco (approximately 372,205 tons) accounted for approximately 32 percent of the waste received at the facility.¹⁸ The landfill has an estimated remaining capacity of approximately 46 million cubic yards, or 74 percent of its permitted capacity. The estimated closure date of the landfill is 2025.¹⁹

¹⁵ Recology web site: <http://www.recologysf.com/>, accessed September 3, 2014.

¹⁶ San Francisco Office of the Mayor, *Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America*, Press Release: October 5, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁷ CalRecycle, Jurisdiction Diversion / Disposal Rate Summary, available online: <http://www.calrecycle.ca.gov/LGCentral/DataTools/Reports/DivDispRtSum.htm>, accessed February 20, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁸ CalRecycle, Disposal Reporting System, Facility Reports, web page: <http://www.calrecycle.ca.gov/LGCENTRAL/Reports/DRS/Origin/FacSummary.aspx>, accessed September 4, 2014.

¹⁹ CalRecycle, Facility/Site Summary Details: Altamont Landfill, web page: <http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/>, accessed September 4, 2014.

The City contract with the Altamont Landfill is anticipated to expire in 2016.²⁰ Through August 1, 2009, the City had used approximately 12.5 million tons of this contract capacity. In 2009, the City announced that it could award its landfill disposal contract to a Recology subsidiary for shipment of solid waste by truck and rail to the Recology Ostrom Road Landfill in Yuba County. This facility has an expected closure date of 2066 with a total design capacity of over 41 million cubic yards.²¹

San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology for disposal and transportation of San Francisco's solid waste. On March 28, 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for this project and to outline their cooperative efforts concerning environmental review. Until certification of that document and other matters are completed, San Francisco's non-recyclable garbage is going to Altamont Landfill.

Hazardous waste, including household hazardous waste, is handled separately from other solid waste. Recology operates a facility at the Tunnel Avenue transfer station for people to safely dispose of the hazardous waste generated from their homes.²²

The ultimate determination with respect to future landfill contracting will be made by the Board of Supervisors on the basis of solid waste planning efforts being undertaken by the City's Department of the Environment.

Construction and demolition (C&D) debris in the City must be transported by a registered transporter²³ to a registered facility²⁴ that can process mixed C&D debris pursuant to the City and County of San Francisco C&D Ordinance. The Ordinance requires that at least 65 percent of C&D debris from a site go to a registered C&D recycling facility. This requirement has been augmented by the Green Building Ordinance, which requires that at least 75 percent of C&D debris be diverted from landfills.

²⁰ Inasmuch as the contract is based on overall disposal tonnage and not a specific time frame, there is no fixed date for the expiration of the City's disposal contract for Altamont Landfill. As of June, 2014, the Department of the Environment projected that the City will reach its permitted limit in early 2016.

²¹ San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology. On March 28, 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for this project and to outline their cooperative efforts concerning environmental review.

²² Recology, web site: <http://www.recologysf.com/index.php/for-homes/transfer-station-residential>, accessed September 2, 2014.

²³ SF Environment, Registered Transporters, http://www.sfenvironment.org/downloads/library/sf_cd_registered_transporters.pdf, accessed February 20, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²⁴ SF Environment, Registered Facilities, http://www.sfenvironment.org/downloads/library/sf_cd_registered_facilities.pdf, accessed February 20, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

3.15 Public Services

3.15.1 Fire Protection

The San Francisco Fire Department (SFFD) provides fire protection and emergency medical services for the City and County of San Francisco. Emergency medical transportation to San Francisco hospitals is provided by a dynamically deployed fleet of both public and private ambulance services. Total daily staff for all SFFD stations is currently 315. The number of personnel per shift depends on the equipment at each station. Fire engines require four staff per shift, ladder trucks require five staff per shift, and the Battalion Chief requires one staff per shift. An engine carries one officer (a captain or a lieutenant) and three firefighters, one of whom is either a designated Emergency Medical Technician (BLS/basic life support) or a Paramedic (ALS/advanced life support).

Fire protection to the project site is provided primarily by the San Francisco Fire Department's Station 43, at 720 Moscow Street at France Avenue (approximately 1 mile to the west), Station 44, at 1298 Girard Street at Wilde Avenue (approximately 1.25 miles to the east), and Station 15, at 1000 Ocean Avenue at Phelan Avenue (approximately 2 miles to the northwest). Scheduled upgrades resulted in temporary closure of Station 44 between October 2013 and spring 2014, and it reopened in May 2014.¹ If one or more of the engine or truck companies were to be out of service at the time of an alarm, the next closest available unit would respond.

3.15.2 Police Protection

The San Francisco Police Department (SFPD) provides law enforcement services in the City and County of San Francisco. Patrol functions are performed by the police officers of the Field Operations Bureau from ten district stations. Police service is provided to the site primarily by the San Francisco Police Department's Ingleside Station, at 1 John V. Young Lane, approximately 2 miles from the project site. In addition, the Ingleside Station maintains a substation on the project site in a two-bedroom unit at the corner of Sunnydale Avenue and Hahn Street.²

The Ingleside Station reported 260 fewer Part 1 crimes in 2011 than in 2010.³ Robbery, assault, burglary, vehicle theft, and theft all decreased, while homicide, rape, and arson increased.^{4,5}

The San Francisco Housing Authority (SFHA), in collaboration with the San Francisco Police Department, implemented a Housing Liaison Program that provides supplemental law enforcement

¹ San Francisco Fire Department, Temporary Fire Station Closure and Service Status, web page: <http://sf-fire.org/index.aspx?page=1170>, accessed September 5, 2014.

² Captain Louis Cassanego, Ingleside Police Station, Personal Communication, September 22, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ In the traditional Summary Reporting System (SRS), there are eight crimes, or Part I offenses: murder and non-negligent homicide, forcible rape, robbery, aggravated assault, burglary, motor vehicle theft, larceny-theft, and arson. These are reported to the federal UCR Program.

⁴ San Francisco Police Department, *Annual Report 2011: Moving Forward*, p. 71. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ Crime statistics are assumed to remain steady for the purposes of analysis.

services to several large family developments, including the project site, starting in 2009. Services are provided pursuant to a Memorandum of Understanding, which is renewed annually.

3.15.3 Schools

The San Francisco Unified School District (SFUSD) oversees the public school system in San Francisco (K–12). A decade-long decline in enrollment at SFUSD ended in the 2008–2009 school year, and total enrollment in the SFUSD has increased from approximately 55,000 in 2007–2008 to nearly 57,650 in the 2013–2014 school year.⁶ Elementary school enrollment increased to 27,400 in 2013–2014 from 25,923 in 2009. In the same 5-year span, middle school enrollment increased slightly, to 11,700 from 11,640, and high school enrollment decreases to 18,550 from 19,611.^{7, 8}

The nearest public schools are John McLaren Early Education School (directly adjacent to the project site), Visitacion Valley Middle School at 450 Raymond Street (approximately 0.5 mile from the project site), Visitacion Valley Elementary School at 55 Schwerin Street (approximately 0.5 mile from the project site), June Jordan School for Equity High School at 325 LaGrande Avenue (approximately one mile from the project site), and Phillip & Sala Burton High School at 400 Mansell Street (approximately one mile from the project site). SFUSD currently uses a diversity index lottery system to assign students to schools based on a number of factors including parental choice, school capacity, and special program needs.⁹

3.15.4 Libraries

There are three branches of the San Francisco Public Library within two miles of the project site. The Visitacion Valley Branch of the San Francisco Public Library is half a mile east of the project site, at 201 Leland Avenue. The Excelsior Branch is located about 1 mile to the northwest, at 4400 Mission Street, and the Portola Branch is about 1.1 miles to the northwest, at 380 Bacon Street.

In November 2000, San Francisco voters approved a bond measure for library improvements. The newly constructed Portola Branch opened in February 2009. The newly constructed Visitacion Valley Branch opened in July 2011.

⁶ California Department of Education, Data Reporting Office, San Francisco Unified School District, K-12 Public School Enrollment, Time Series, 1996-2014. Available on the internet at: <http://dq.cde.ca.gov/dataquest/DQ/EnrTimeRpt.aspx?Level=District&cYear=2013-14&cname=San%20Francisco%20Unified&cCode=3868478>. Reviewed October 8, 2014.

⁷ California Department of Education, Data Reporting Office, San Francisco Unified School District, District Enrollment by Grade, 2013-2014. Available on the internet at: <http://dq.cde.ca.gov/dataquest/Enrollment/GradeEnr.aspx?cChoice=DistEnrGrd&cYear=2013-14&cSelect=3868478--San%20Francisco%20Unified&TheCounty=&cLevel=District&cTopic=Enrollment&myTimeFrame=S&cType=ALL&cGender=B> Reviewed October 8, 2014.

⁸ These figure are anticipated to remain steady for the purposes of analysis.

⁹ SFUSD, History of the Student Assignment Method, available online at: http://portal.sfusd.edu/apps/departments/educational_placement/HistoryStudentAssignment.pdf, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

3.16 Biological Resources

This discussion of biological resources includes vegetation, wildlife, sensitive habitats, and special-status species that are found or are potentially found on the project site. The biological resources on the project site were identified during a site assessment conducted on April 12, 2010, by Environmental Science Associates (ESA).¹ The purpose of the site assessment was to verify existing biological conditions, assess vegetation and wildlife habitats, and identify potential for special-status species to occur within the project site. Additionally, a reconnaissance level survey was conducted on March 15, 2013 by ESA to document any changes to site conditions from 2010.

3.16.1 Project Setting

The project site is located within the southern end of San Francisco in the Visitacion Valley neighborhood. John McLaren Park borders the site on the west, Gleneagles Golf Course (part of McLaren Park) borders the project site on the north, and single-family homes and apartments border the project site on the east and south. McLaren Park contains the 165-acre McLaren Park Natural Area that comprises grassland, scrub, and tree-dominated vegetation communities. The next closest open space is San Bruno Mountain, which is located approximately half a mile south of the project site, but apartment buildings and the Cow Palace separate the San Bruno Mountain open space from the project site.

3.16.2 Vegetation Communities and Wildlife Habitats

The Sunnydale project site consists of barrack-style residences with open yards and community recreational areas. The majority of the project site is developed with open landscaped yards. A total of 353 trees of 25 different species are present on the site.² Mixed exotic forest with non-native grassland understory occurs within the western edge of the project site between the residences and McLaren Park. These biological communities are described below.

Developed and Landscaped

The project site is mostly developed with residences, roads, and parking lots. Undeveloped portions, such as lawns and landscaping, are highly disturbed from local foot and vehicular traffic. The site has been poorly maintained and trash and household items are present in the open yards. The *Sunnydale Tree Inventory & Assessment Plan 2010*³ identified all trees within the project site. Twenty-five species of trees were identified, and Monterey pine (*Pinus radiata*), bluegum eucalyptus (*Eucalyptus globulus*), Callery pear (*Pyrus calleryana*), Brazilian pepper tree (*Schinus terebinthifolius*), and Italian stone pine (*Pinus pinea*) were the most common.

¹ Environmental Science Associates (ESA), *Sunnydale Redevelopment Biological Assessment*, technical memorandum to file, May 27, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Bartlett Tree Experts, *Sunnydale Tree Inventory & Assessment Plan 2010*. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ *Ibid.*

Birds identified on the project site were species typically accustomed to urban environments and associated disturbance from human activities, including gulls (*Larus* spp.), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), rock dove (*Columba livia*), European starling (*Sturnus vulgaris*), Brewer's blackbird (*Euphagus cyanocephalus*), and American robin (*Turdus migratorius*). Feral and/or domestic cats (*Felis catus*) are also abundant at the project site.

Mixed Exotic Forest

Mixed exotic forest occurs within the western edge of the project site and along the northern boundary. The forest along the western edge is contiguous with the mixed exotic forest occupying the adjacent McLaren Park. Within the project site, the exotic forest is covered by Monterey cypress (*Cupressus macrocarpa*) and eucalyptus (*Eucalyptus* spp.) trees with a generally non-native annual grassland and ruderal understory. The grassland within the project boundary differs from that located within adjacent McLaren Park in that the McLaren Park grassland contains stands of native grasses and forbs, but the on-site grassland largely lacks native species. Common understory plants within the project site include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), white ramping fumitory (*Fumaria capreolata*), white onion weed (*Allium triquetrum*), bedstraw (*Galium aparine*), miner's lettuce (*Claytonia perfoliata*), radish (*Raphanus sativus*), poison oak (*Toxicodendron diversilobum*), and dichondra (*Dichondra* sp.). Mixed exotic forest along the northern edge of the project site is contiguous with the Gleneagles Golf Course. Dominant trees include Monterey cypress, eucalyptus, and Monterey pine. In addition to the non-native grasses mentioned above, this area also supports Himalayan blackberry (*Rubus discolor*), English ivy (*Hedera helix*), and French broom (*Genista monspessulana*).

In 2010, one lupine (*Lupinus* sp.) was found within non-native grassland in the southwest corner of the project site. This plant did not contain reproductive parts at the time of the survey and therefore ESA was unable to determine the species. Three species of bush lupine (*Lupinus albifrons*, *L. formosus*, and *L. variicolor*) may serve as larval host plants for the federally endangered mission blue butterfly (*Plebejus icarioides missionensis*). During the 2013 survey, several sky lupines (*Lupinus nanus*), which are not host plants for the mission blue butterfly, were identified at the same location as the unknown lupine. No other lupines were observed during the 2013 survey.

Several bird species were observed within the mixed exotic forest inside and adjacent to the project site, including American robin, common raven, mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), song sparrow (*Melospiza melodia*), chesnut-backed chickadees (*Poecile rufescens*), European starling, and Cooper's hawk (*Accipiter cooperii*). A white-tailed kite (*Elanus leucurus*) was also observed carrying nesting material to a tree located within the mixed exotic forest near McLaren Park. Ground squirrels were also observed at the golf course adjacent to the project site.

3.16.3 Sensitive Natural Communities, Including Wetlands

The California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) reports no sensitive natural community occurrences within the project site or within a

2-mile radius of the project boundary (CDFW, 2013).⁴ Additionally, no sensitive natural communities or wetlands were observed during site assessments in 2010 or 2013.

The San Francisco Recreation and Parks Department (SFRPD) *Significant Natural Resources Management Plan*⁵ identifies "important bird habitat" as occurring within John McLaren Park. As noted in the Plan, the Park provides foraging and nesting habitat for a variety of birds, such as western meadowlark (*Sturnella neglecta*), American goldfinch (*Carduelis tristis*), and lesser goldfinch (*Carduelis psaltria*). Mapped "important bird habitat" is approximately 100 feet from the project footprint.

3.16.4 Special-Status Species

A number of species known to occur in the vicinity of the project site are protected pursuant to federal and/or state endangered species laws, or have been designated Species of Special Concern by the California Department of Fish and Wildlife (CDFW). In addition, Section 15380(b) of the California Environmental Quality Act (CEQA) *Guidelines* provides a definition of rare, endangered, or threatened species that are not included in any listing.⁶ Species recognized under these terms are collectively referred to as "special-status species." For the purposes of this Environmental Impact Report / Environmental Impact Statement (EIR/EIS), special-status species include:

- Plant and wildlife species listed as rare, threatened or endangered under the federal or state endangered species act;
- Species that are candidates for listing under either federal or state law;
- Species formerly designated by the United States Fish and Wildlife Service (USFWS) as Species of Concern or by the CDFW as Species of Special Concern;
- Species such as candidate species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA *Guidelines*, such as those listed in the California Native Plant Society (CNPS) California Rare Plant Rank 1B.

Appendix BI provides comprehensive lists of the special-status species that have been documented from, or have potential to occur in suitable habitat within, the project site. These lists include occurrences documented by the CNDDB,⁷ the CNPS Electronic Inventory,⁸ and the USFWS

⁴ California Department of Fish and Wildlife (CDFW), 2013, California Natural Diversity Database for 7.5 minute topographic quadrangles of San Francisco South, Commercial Version. Accessed March 13, 2013. Information Expires 9/5/2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ San Francisco Recreation and Park Department, 2006. *Significant Natural Resource Areas Management Plan Final Draft*. February 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ For example, vascular plants listed as rare or endangered or as Rank 1 or 2 by the California Native Plant Society (CNPS) are considered to meet Section 15380(b) criteria. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁷ CDFW, *op. cit.*

⁸ California Native Plant Society (CNPS), 2013. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed on Thursday, April 04, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

database.⁹ Based on review of the biological literature of the region and the CNDDDB, CNPS, and USFWS lists--as well as an evaluation of the habitat conditions of the proposed project site--many of these species were eliminated from further evaluation because (1) the project site does not and/or never has provided suitable habitat for the species, or (2) the known range for a particular species is outside of the project site.

Of the special-status plants and animals evaluated through the aforementioned methods, the following five species either were observed within the project site or were determined to have some potential to occur within the project site:

- Cooper's hawk (*Accipiter cooperi*)
- Red-tailed hawk (*Buteo jamaicensis*)
- White-tailed kite (*Elanus leucurus*)
- Western red bat (*Lasiurus blossevillei*)
- Townsend's big-eared bat (*Corynorhinus townsendii townsendii*)

These species are described in further detail below and are fully considered in the impact analysis presented later in this section.

Special-Status Plants

No special-status plant species were found within the project site during either the 2010 or 2013 surveys. Potential special-status plant species were excluded from evaluation either due to lack of habitat or because they were not observed during the 2010 or 2013 surveys conducted within their respective blooming periods. The entire project site is heavily disturbed, and most of the site is developed. Although mixed exotic forest does occur within a portion of the site, this community is dominated by non-native grasses and forbs and is not expected to provide habitat for special-status plants.

Franciscan manzanita (*Arctostaphylos franciscana*) is a federally endangered shrub historically found in serpentine soils, bedrock outcrops, greenstone, and mixed Francisco rock.¹⁰ It was historically known from three to four locations on the San Francisco peninsula, but its current range includes one wild plant that was transplanted from Doyle Drive in San Francisco to the San Francisco Presidio, as well as a few plants salvaged from the Laurel Hill Cemetery and placed into botanical gardens. Critical habitat was designated for this species on December 20, 2013.¹¹ The McLaren Park West proposed critical habitat unit (Unit 13) is located in McLaren Park west of, and outside of, the project site. Franciscan manzanita has not been documented within the McLaren Park West unit. Franciscan manzanita were not observed within the project site during site surveys conducted in 2010 or 2013 and is therefore not expected to occur on-site.

⁹ United States Fish and Wildlife Service (USFWS), 2013. Official List of Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in San Francisco County. Document Number: 130313123314. March 13, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ USFWS, 2013. Recovery Outline for the *Arctostaphylos franciscana* (Franciscan manzanita). February 2013.

¹¹ Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Arctostaphylos franciscana*, Final Rules, Federal Register Vol. 78, No. 125, June 28, 2013.

Several checkerbloom (*Sidalcea malvaeflora*) were found in the mixed exotic forest. Checkerbloom was included in the discussion on sensitive plant species in SFRPD's *Significant Natural Resources Management Plan*, but does not have any special status.

Special-Status Animals

Birds

Cooper's hawk. Cooper's hawk ranges over most of North America and may be seen throughout California, most commonly as a winter migrant. Nesting pairs have declined throughout the lower-elevation, more populated parts of the state. Cooper's hawk generally forage in open woodlands and wooded margins and nest in tall trees, often in riparian areas. This species was observed within the project area during the 2010 site survey. This species has potential to forage and nest within trees in or adjacent to the project boundary. Cooper's hawk is protected under Section 3503.5 of the *California Fish and Game Code* as a raptor.

Red-tailed hawk. Red-tailed hawks are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals but also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats and have been observed throughout San Francisco. This species has been documented breeding in McLaren Park.¹² This hawk may forage and/or nest in trees within or adjacent to the project boundary. Red-tailed hawk is protected under Section 3503.5 of the *California Fish and Game Code* as a raptor.

White tailed kite. White tailed kite occurs year-round in coastal and valley lowlands. They nest in trees, such as oaks and willows, usually 20 to 100 feet above ground, near open foraging areas--such as grasslands, meadows, farmlands, and wetlands. One white tailed kite was observed carrying nesting materials into a tree located within the western edge of the project boundary during the 2013 survey. The white tailed kite is a CDFW fully protected species.

Mammals

The project site provides potential roosting habitat for two special-status bat species. However, foraging opportunities in such an urbanized area are relatively low, with few open or vegetated areas and no areas of standing water to host insect populations. Both bat species are California species of special concern.

Western red bat. The western red bat has a widespread distribution throughout California. These bats are generally solitary and roost in trees with dense foliage. They are tolerant of cold

¹² San Francisco Field Ornithologists, San Francisco Breeding Bird Atlas, 2001-2003. Available online at: <http://www.sffo.org>, accessed on April 4, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

temperatures and are not known to hibernate, although it is possible that they do in colder climates.¹³ This species may use trees within the project site for roosting.

Townsend's big-eared bat. Townsend's big-eared bats occur in a variety of habitats and use caves, mines, tunnels, buildings, or other human-made structures for roosting. While the potential for their occurrence within the project site is low, it is possible that this species could be found in abandoned or underused buildings.

¹³ Jameson, E.W. and Peeters, H.J., California Mammals, University of California Press, Berkeley, CA, 1988. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

3.17 Geology and Soils

3.17.1 Regional Geologic Setting

San Francisco is located in the northern portion of the San Francisco peninsula, which is part of the geologically complex California Coast Ranges geomorphic province. The Coast Ranges province is characterized by a series of northwest-trending ridges and valleys that run roughly parallel to the San Andreas fault zone and can be further divided into the northern and southern ranges that are separated by the San Francisco Bay. San Francisco Bay lies within a broad depression created from an east-west expansion between the San Andreas and the Hayward fault systems. The San Andreas fault, the Hayward fault, and associated subsidiary faults are indicators of the tectonic forces that characterize the margin between the Pacific Tectonic Plate and the North American Tectonic Plate, where the Pacific Tectonic Plate slowly creeps northward past the North American Tectonic Plate. The Bay and northern portion of the San Francisco peninsula are within a structural down-dropped block between the northern Santa Cruz Mountains to the west and Diablo Mountain Range to the east. Much of the Coast Range province comprises sedimentary deposits and volcanic rocks, and older, stiffer Franciscan bedrock made up of sandstones, chert, greenstone, greywacke and shale that have been largely folded and deformed from tectonic forces.

3.17.2 Local Geologic Setting

The geology in the area of the project site has been described as slope debris or ravine fill, and undifferentiated deposits of sand, silt and clay (which underlie the majority of the site).¹ Bedrock is mapped west of the property as sheared Franciscan Complex, which is consistent with what was observed in outcrops and boring samples during a geotechnical investigation for the project.² For the eastern portion of the project site, a geotechnical consultant previously found the site to be underlain by silty and clayey sand.³ The upper 5 feet was typically loose and became denser with depth. Very loose to loose sands were encountered in the upper 1 to 5 feet. Bedrock was not encountered in the maximum 15 feet explored for the eastern portion of the site but was encountered at depths ranging from 5 to 43 feet below ground surface on the western portion of the site. Bedrock was extremely weak to very weak, very closely fractured to crushed, highly weathered and sheared metasedimentary claystone, siltstone and sandstone of the Franciscan Complex.⁴ In addition, the geotechnical investigation determined that the underlying soils of the site had a low to moderate potential for expansion.⁵

¹ Engeo, Incorporated, *Geotechnical Report – Sunnydale – Velasco Redevelopment*, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² *Ibid.*

³ *Ibid.*

⁴ *Ibid.*

⁵ *Ibid.*

3.17.3 Faulting and Seismicity

The major active faults within 20 miles of the project area are the San Andreas, Hayward, Calaveras, Healdsburg-Rodgers Creek, Concord-Green Valley, and the San Gregorio faults. **Table 3.17-1** summarizes the distance from the project site, direction to the fault, and the estimated maximum earthquake moment magnitude (Mw) for each fault located within approximately 30 miles (50 kilometers) of the project site.

TABLE 3.17-1
MAJOR ACTIVE SAN FRANCISCO BAY AREA FAULTS
IN THE NEAR VICINITY OF THE PROJECT SITE

Fault Name	Age ^a	MHE ^b	Mw ^c	Approximate Distance from Project Site ^d
San Andreas	Historic	7.8 (1906)	7.9	8 miles
Hayward	Historic	6.8 (1868)	7.1	12 miles
Calaveras	Historic	6.5 (1861)	6.8	25 miles
Healdsburg-Rodgers Creek	Historic	6.3 (1898)	7.0	30 miles
Concord-Green Valley	Historic	5.4 (1955)	6.9	27 miles
San Gregorio (Seal Cove)	Holocene	3-6.4 (AD 1270-1400)	7.3	18 miles
Mount Diablo Thrust	Quaternary (possibly active)	n/a ^e	6.7	26 miles

NOTES/SOURCES:

- ^a Holocene faults are those that have shown geologic evidence of movement within Holocene time (approximately the last 11,000 years). Historic faults are Holocene faults that have also demonstrated fault movement within the last 200 years. Quaternary faults have demonstrated displacement within last 1.6 million years. The Mount Diablo fault is a blind fault, meaning there is no surface expression of the fault, making dating its pre-historic activity difficult.
- ^b MHE = Maximum Historic Earthquake. The magnitude is provided as the Richter magnitude, based on measurements or inferred from geologic and observed evidence of earthquake effects. Source: United States Geological Survey (USGS), "Historic United States Earthquakes," available on the Internet at http://earthquake.usgs.gov/earthquakes/states/historical_state.php, viewed on April 10, 2013.
- ^c Mw = Maximum Moment Magnitude Earthquake (Mw). Moment magnitude is related to the physical size of a fault rupture and movement across a fault and provides a physically meaningful measure of the size of a faulting event. Source: California Geological Survey (CGS), *Probabilistic Seismic Hazard Assessment For The State Of California, Appendix A: Fault Source Parameters*, revised in 2002, from CDMG Open File-Report 96-08, available on the Internet at <http://www.consrv.ca.gov/CGS/rghm/psha/ofr9608/>, 2002.
- ^d Distance obtained from Jennings, C.W. and Bryant, W.A., compilers, California Geological Survey (CGS), *2010 Fault Activity Map of California*, CGS Geologic Data Map No. 6, also available on the Internet at <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>, 2010.
- ^e n/a = not applicable.

An earthquake is classified by the amount of energy released, expressed as the magnitude of the earthquake. Traditionally, magnitudes have been quantified using the Richter scale. However, seismologists now use a Mw scale because it provides a more accurate measurement of the size of major and great earthquakes. Moment magnitude is directly related to the average slip and fault rupture area.

Since 1800, four major earthquakes have been recorded on the San Andreas fault. In 1836, an earthquake with an estimated Mw of 6.4 occurred east of Monterey Bay (San Juan Bautista) on the San Andreas fault.⁶ Shortly thereafter, in 1838, an earthquake with an Mw of about 7.5 occurred on the San Andreas fault. The San Francisco earthquake of 1906 caused the most substantial damage in the history of the Bay Area in terms of loss of lives and property damage. This earthquake created a surface rupture along the San Andreas fault from Shelter Cove to San Juan Bautista, approximately 290 miles in length. It had an Mw of about 7.9 and was felt 350 miles away in Oregon, Nevada, and Los Angeles. The most recent large earthquake to affect the Bay Area was the Loma Prieta earthquake on October 17, 1989. The epicenter of this earthquake was approximately 60 miles from the project area in the Santa Cruz Mountains. The earthquake had an Mw of 6.9.

On the Hayward fault, an earthquake with an estimated Mw of 6.8 occurred in 1868 on the southern segment (between San Leandro and Fremont). In 1861, an earthquake of unknown magnitude (probably an Mw of about 6.5) was reported on the Calaveras fault. The most recent substantial earthquake on this fault was the 1984 Morgan Hill earthquake with an Mw of 6.2.

The United States Geological Survey (USGS) estimates that there is a 63-percent probability of a strong earthquake (Mw 6.7 or higher) occurring on one of the regional faults in the 30-year period between 2007 and 2036.⁷

The intensity of earthquake-induced ground motions and the potential forces affecting structures within the project site would depend on a variety of factors including the magnitude of the event and distance to the epicenter. The project site is located in an area subject to “very strong” groundshaking (Modified Mercalli Intensity VIII) based on all earthquake scenarios that would include the San Andreas and the Hayward faults.⁸

The Community Safety Element also includes maps indicating areas of the city subject to liquefaction and landslides. According to Map 4 of the Community Safety Element (Areas of Liquefaction Potential), the project site is primarily located outside of the areas considered to have liquefaction potential. A small area of the southeast portion of the project site, however, is mapped as potentially liquefiable.⁹ The geotechnical investigation for the project site--based on analysis of site soils--concluded that the potential for liquefaction at the site is low.¹⁰ Map 5 of the

⁶ California Geologic Survey, *Earthquake Mapping Center, Significant California Earthquakes*. available on the Internet at <http://www.conservation.ca.gov/CGS/rghm/quakes/Pages/eq_chron.aspx>. viewed on March 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁷ United States Geological Survey, *The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2)*, by the Working Group on California Earthquake Probabilities, Open File Report 2007-1437, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ ABAG, *Earthquakes and Hazards Program, San Francisco County Earthquake Hazard*, web page: <http://quake.abag.ca.gov/earthquakes/sanfrancisco/>, last updated June 25, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ *San Francisco General Plan, Community Safety Element, 1996 and Community Safety Element Update 2007*.

¹⁰ It should also be noted that the site soils were not found to contain serpentinite which is also discussed below in the Hazardous Materials section. Engeo Incorporated, *op cit*.

Community Safety Element (Areas Susceptible to Landslides) shows the project site as being within an identified area that is susceptible to landslides.¹¹ The geotechnical investigation for the proposed project concluded that some portions of the west end of the site are located in a Seismically Induced Landslide Hazard Zone. Standard geotechnical approaches to grading would effectively mitigate this hazard.¹²

¹¹ *San Francisco General Plan, op cit.*

¹² *Engeo Incorporated, op cit.*

3.18 Hydrology and Water Quality

3.18.1 Surface Water Hydrology and Water Quality

The project site is located within the San Francisco Bay Hydrologic Unit. San Francisco Bay is a large, complex, and highly dynamic estuarine environment that receives saltwater inputs from the Pacific Ocean. San Francisco Bay is relatively shallow, with an average depth of approximately 20 feet and a median depth of approximately 7 feet at mean lower low water.¹

Water quality in the San Francisco Bay is saline and predominated by ocean influences. During periods of high levels of surface runoff, however, substantial freshwater migrates through San Pablo Bay and into San Francisco Bay from the Sacramento-San Joaquin River system. This inundation of freshwater can temporarily reduce the salinity of waters in the project vicinity to substantially less than ocean water.² Additionally, tidal currents influence circulation, flushing action, and water exchange within the Bay, thereby affecting sedimentation and water quality characteristics. Various contaminants are transported into San Francisco Bay by an assortment of sources including urban uses, industrial outfalls, municipal wastewater outfalls, municipal stormwater, upstream farming, upstream historic and current mining discharges, legacy pollutants, and various other pollutant sources. Legacy pollutants are constituents that are considered harmful to human health or the environment that were historically emitted by industry or other human activities, and that are in general banned or substantially restricted from current usage. Examples include mercury, lead, polychlorinated biphenyls (PCBs), and dichlorodiphenyltrichloroethane (DDT).

Pollutants are introduced into San Francisco Bay primarily through runoff, combined sewer overflows, stormwater discharges, spills and leaks, and remobilization of contaminants from sediment into the overlying water column. The Regional Water Quality Control Board (RWQCB) listed the San Francisco Bay as an impaired water body. Under Section 303(d) of the Clean Water Act, impaired waters are defined as those that do not meet water quality standards, even after point sources of pollution have implemented pollution control technology. The pollutants listed for the Central Bay include chlordane, DDT, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, and selenium.³ Pollutant levels vary seasonally and annually, dependent upon their specific source and degradation characteristics. Contaminants--such as

¹ Regional Water Quality Control Board, *Total Maximum Daily Load for PCBs in San Francisco Bay, Final Staff Report for Proposed Basin Plan Amendment*, www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbs/Staff_Report.pdf, February 13, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Bay Institute, *The Bay Institute Ecological Scorecard, San Francisco Bay Water Quality Index*, October 17, 2003. Available on the Internet at http://www.bay.org/assets/Water_Quality.pdf, viewed on March 14, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ Regional Water Quality Control Board, *CWA 2006 303(d) List of Water Quality Segments Requiring TMDLs*, approved by the United States Environmental Protection Agency on June 28, 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

ammonia, copper, and legacy pesticides--have decreased over recent years due to cleanup efforts and natural attenuation.⁴

3.18.2 Beneficial Uses

As further discussed in Section 4.18, San Francisco Bay waters are under the jurisdiction of the San Francisco Bay RWQCB, which establishes regulatory standards and objectives for water quality in the Bay in the Water Quality Control Plan for the San Francisco Bay Basin, commonly referred to as the Basin Plan. The Basin Plan identifies existing beneficial uses, limited beneficial uses, and potential beneficial uses for Bay Area water bodies. The Basin Plan identifies the following existing beneficial uses for the San Francisco Bay, Central Bay: ocean, commercial, and sport fishing; estuarine habitat; industrial service supply; industrial process supply; fish migration; fish spawning; navigation; preservation of rare and endangered species; water contact recreation; non-contact water recreation; shellfish harvesting; and wildlife habitat.⁵ No “potential” beneficial uses or “limited” beneficial uses are identified for the Central Bay.

3.18.3 Local Hydrology

The project site is located within the Sunnydale Watershed, which is a 1.6-square-mile basin located at the southeastern edge of San Francisco. The watershed, which almost completely encompasses the Visitacion Valley neighborhood, is bounded by McLaren Park to the west, Bayview Hill to the north, San Bruno Mountain to the south, and Candlestick Park and San Francisco Bay to the east. The southern part of the basin extends beyond the San Francisco city line into Daly City and Brisbane. The 1,000-acre Sunnydale Drainage Basin is estimated to be 52 percent impervious. It is responsible for approximately 3 percent of total annual runoff entering the City’s combined sewer system, or about 280 million gallons per year (inclusive of wastewater and stormwater).⁶ Runoff entering the combined system from the eastern half of the City, including the project site, flows to the Southeast Water Pollution Control Plant (SEWPCP).

Flooding

The Federal Emergency Management Agency (FEMA) is preparing Flood Insurance Rate Maps (FIRMs) for the City and County of San Francisco (CCSF) for the first time.⁷ FIRMs identify areas that are subject to inundation during a flood having a 1-percent chance of occurrence in a given year (also known as a “base flood,” “100-year flood,” or “1 percent annual chance flood”). FEMA

⁴ *Ibid.*

⁵ Regional Water Quality Control Board, *San Francisco Bay Basin Plan, Beneficial Uses*, also available on the Internet at <http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/bp_ch2+tables.pdf>. approved December 31, 2011 This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ San Francisco Public Utilities Commission, LID Basin Analysis Report, Sunnydale Drainage Basin, March 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁷ In September 2007, FEMA issued a preliminary FIRM of San Francisco for review and comment by the City. The City submitted comments that year, and FEMA anticipates publishing a revised preliminary FIRM, after completing a more detailed analysis of flood hazards associated with San Francisco Bay as requested by Port and City staff. FEMA will finalize the FIRM and publish it for flood insurance and floodplain management purposes after reviewing comments and appeals related to the revised preliminary FIRM.

refers to the flood plain as an area that is at risk from a flood of this magnitude as a special flood hazard area. According to preliminary updated FEMA flood maps for San Francisco, the proposed project is neither within Zone A (areas subject to inundation by tidal surge) nor Zone V (areas of coastal flooding subject to wave hazards).⁸

The project site is also subject to flooding from sewer backups. Evidence of sewer backups can be seen with sewage flow over the sidewalks. These backups are caused by clogged sewer laterals from partial pipe collapse or root intrusion.⁹

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- ⁸ Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at <http://sfgsa.org/index.aspx?page=828>, accessed July 14, 2010; San Francisco Interim Citywide Floodplain Map, Final Draft, July 2008, available on the internet at: <http://sfgsa.org/Modules/ShowDocument.aspx?documentid=1761>. Reviewed August 10, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.
- ⁹ KPFF Consulting Engineers, Sunnydale Development Existing Infrastructure Deficiencies, April 23, 2012.

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3.19 Hazards and Hazardous Materials

This section addresses the existing setting relevant to hazards and hazardous materials associated with historic and current uses of the project site and vicinity. This section incorporates the results of environmental database records searches conducted in 2013 for the project site and vicinity. Information in this section is also based on a review of the Phase I and Phase II Environmental Site Assessment Reports prepared for the project site in April 2010 and June 2011, respectively.¹

3.19.1 Background

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or generate vapors when mixed with water (reactivity). The term “hazardous material” is defined in law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a substantial present or potential hazard to human health and safety or to the environment.² In some cases, past industrial or commercial uses on a site can result in spills or leaks of hazardous materials and petroleum, causing contamination of underlying soil and groundwater. Federal and state laws require that soils and groundwater having concentrations of contaminants--such as lead, gasoline, or industrial solvents--that are higher than certain acceptable levels must be handled and disposed as hazardous waste during excavation, transportation, and disposal. The *California Code of Regulations* (CCR), Title 22, §66261.20–24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste. The use of hazardous materials and disposal of hazardous wastes are subject to numerous laws and regulations at all levels of government (see Regulatory Framework in Section 4.19).

3.19.2 Historic and Current Land Uses

According to historical aerial photographs for the area, Visitacion Valley has a history of agricultural uses and the project site was undeveloped as of 1935.³ The existing residential development was built in the early 1940s and used to house wartime ship builders.⁴ At that time, the project site was surrounded by agricultural greenhouses, which over time were replaced largely by a mixture of residential and commercial use. Based on the aerial photographs from 1946 and 1956, the area adjacent to the project site was substantially developed during that time.⁵

¹ AEW Engineering, Inc. *Final Phase I Environmental Site Assessment Report, 1654 Sunnydale Avenue Site, San Francisco, California*, prepared for Sunnydale Development Co. LLC., April 5, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E. AEW Engineering, Inc. *Final Phase II Environmental Site Assessment Report, 1654 Sunnydale Avenue Site, San Francisco, California*, prepared for Sunnydale Development Co. LLC., June, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² State of California, *Health and Safety Code*, Chapter 6.95, Section 25501(o).

³ Van Meter Williams Pollack, *A New Sunnydale; Existing Conditions Analysis*, Draft April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ *Ibid.*

⁵ AEW Engineering, Inc. *Final Phase I Environmental Site Assessment Report, 1654 Sunnydale Avenue Site, San Francisco, California*, prepared for Sunnydale Development Co. LLC., April 5, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The aerial photographs from 1956 to 2005 indicated no substantial change in use at the adjacent properties. Landscaping maintenance at the project site that was once provided by the city was discontinued in 1982.⁶

Schools within One-quarter Mile of the Project Site

There are three schools located within a quarter mile of the project site including the McLaren School Early Education School (a prekindergarten program operated by San Francisco Unified School District (SFUSD)), Visitacion Valley Elementary, and Our Lady of the Visitacion School. The Visitacion Middle School is located approximately one-third of a mile from the project site.

Airport Safety Zone

The closest airport to the project site is San Francisco International Airport, which is approximately 6 miles to the south-southeast. Based on a review of the *Comprehensive Land Use Compatibility Plan for the Environs of San Francisco International Airport*,⁷ the project site is not within the boundary of the San Francisco International Airport's airport influence area (AIA). Oakland International Airport is farther away, approximately 10 miles from the project site.

Potentially Contaminated Site Within One Mile of the Project Site

A Phase I environmental investigation prepared for the site in April 2010 reviewed environmental databases and found a total of five sites located within one-half mile of the project site that had documented releases.⁸ However, based on groundwater flow and distances to these sites (all greater than one-quarter of a mile away), none were suspected of having a potential for affecting soils at the project site.⁹ A more recent review of these environmental databases administered through the Department of Toxic Substances Control and the State Water Resource Control Board confirms that no new hazardous release sites are present within or immediately adjacent to the project site.¹⁰

Soil Investigation on the Project Site

A Phase II environmental investigation was conducted for the site in 2011 and summarized in a report in June.¹¹ The Phase II investigation was based on the findings of the Phase I investigation and consisted of sampling shallow soils to determine the presence of petroleum hydrocarbons,

⁶ Van Meter Williams Pollack, *op cit.*, April 2009.

⁷ City/County Association of Governments of San Mateo County. *Comprehensive Land Use Compatibility Plan for the Environs of San Francisco International Airport*, October 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ AEW Engineering, 2010, *op cit.*

⁹ *Ibid.*

¹⁰ Department of Toxic Substances Control, EnviroStor Database and Geotracker Database, http://www.envirostor.dtsc.ca.gov/public/map.asp?global_id=&x=-119.1357421875&y=37.82280243352756&z1=5&ms=640,480&mt=m&findaddress=True&city=SAN%20FRANCISCO&zip=&county=&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&corrective_action=true&permit_site=true&permit_and_ca_site=true, accessed April 2, 2013.

¹¹ AEW Engineering, 2011, *op cit.*

volatile organic compounds, or metals that might exceed regulatory thresholds. The results of the laboratory analysis on the soil samples collected concluded that with the exception of detections of the metals arsenic and vanadium, all concentrations were below regulatory thresholds. The concentrations of arsenic and vanadium were above screening levels, however, they were consistent with background levels for the region and not likely to be attributed to any releases associated with previous land uses.¹² As such, no further investigation or remediation is warranted which was confirmed by the San Francisco Department of Public Health.¹³

Serpentinite Rock

Serpentinite rock contains the fibrous mineral chrysotile, which is considered an asbestos mineral. Serpentinite was not encountered during site geotechnical exploration, and no vlenlets of chrysotile were observed in bedrock outcrops during reconnaissance of the site. Soil samples collected from some of the exploratory boreholes undertaken during the geotechnical analysis were tested for the presence of naturally occurring asbestos derived from the weathering of serpentine found within the underlying Franciscan bedrock. The test results indicated that the soil tested was “non-asbestos containing material” consisting of material with a naturally occurring asbestos content of less than 0.25 percent by weight.¹⁴

Hazardous Building Materials

Development and redevelopment projects often involve the need to demolish existing older structures. Many older buildings contain building materials that consist of hazardous materials, which can be hazardous to people and the environment once disturbed. These materials include lead-based paint, asbestos-containing materials (ACMs), and polychlorinated biphenyls (PCBs).

Lead-based Paint

Prior to the United States Environmental Protection Agency (U.S. EPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Through such disturbances as sanding and scraping activities, renovation work, or gradual wear and tear, old peeling paint or paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects, especially in children. Given the age of the buildings, it is likely that the structures contain lead-based paint.

Asbestos-Containing Materials

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the U.S. EPA in the 1970s. Asbestos-containing materials were commonly used for insulation of heating ducts

¹² *Ibid.*

¹³ San Francisco Department of Public Health, *1654 Sunnydale HOPE Project*, June 17, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁴ Engeo Incorporated, *Draft Geotechnical Report: Sunnydale-Velasco Redevelopment*, May 2009.

as well as ceiling and floor tiles. Similar to lead-based paint, contained within the building materials asbestos fibers present no substantial health risk. But once these tiny fibers are disturbed, they become airborne and become a respiratory hazard. The fibers are very small and cannot be seen with the naked eye. Once they are inhaled, they can become lodged into the lung potentially causing lung disease or other pulmonary complications. Asbestos-containing materials are present within existing structures on the site.

Light Fixtures Containing PCBs and Mercury

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid-to-late 1970s, the U.S. EPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. Fluorescent lighting tubes also typically contain mercury vapor that can be released if the tubes are broken during demolition activities. Without any site specific data to the contrary, there is a potential for building materials at the site to contain PCBs and/or mercury.

3.20 Mineral and Energy Resources

3.20.1 Mineral Resources

In accordance with the Surface Mining and Reclamation Act of 1975 (discussed in Section 5.18.2.2, State Regulations, below), the California Department of Conservation, Division of Mines and Geology, currently known as the California Geological Survey, has mapped nonfuel mineral resources of the state to show where economically significant mineral deposits are either present or likely to occur, based on the best available scientific data. These resources have been mapped using the California Mineral Land Classification System, which includes the following four Mineral Resource Zones (MRZs):

- **MRZ-1.** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2.** Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- **MRZ-3.** Areas containing mineral deposits, the significance of which cannot be evaluated.
- **MRZ-4.** Areas where available information is inadequate for assignment to any other zone.

In accordance with this mapping, the project site is mapped as MRZ-1, indicating that substantial mineral resources do not occur in that location.¹ The *San Francisco General Plan* does not identify and areas of important mineral resources in the city.

3.20.2 Energy Resources

California's Energy Use and Supply

Californians consumed 272,656 gigawatt hours (GWH) of electricity in 2011.² Of this total, San Francisco consumed 5,837 GWH. In 2010, the California electricity mix included natural gas (53.4 percent), coal (1.7 percent), large hydroelectric plants (14.6 percent), and nuclear (15.7 percent). The remaining 14.6 percent was supplied from renewable resources such as wind,

¹ California Department of Conservation, Division of Mines and Geology, "Update of Mineral Land Classification: Aggregate Minerals in the South San Francisco Bay Production-Consumption Region," DMG Open-File Report 96-03, 1996. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² California Energy Commission, Energy Consumption Data Management Service, Electricity Consumption by County, available online at <http://ecdms.energy.ca.gov/elecbycounty.aspx>, accessed February 14, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

solar, geothermal, biomass, and small hydroelectric facilities.³ California's natural gas use grew from 41.5 percent in 2006 to 53.4 percent in 2010.^{4,5}

In 2002, California established its Renewable Portfolio Standard program⁶ with the goal of increasing the annual percentage of renewable energy in the state's electricity mix by the equivalent of at least 1 percent of sales, with an aggregate total of 20 percent by 2017. The California Public Utilities Commission subsequently accelerated that goal to 2010 for retail sellers of electricity (*Public Utilities Code* Section 399.15(b)(1)). Then-Governor Schwarzenegger signed Executive Order S-14-08 in 2008, increasing the target to 33 percent renewable energy by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the Air Resources Board under its Assembly Bill (AB) 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. In September 2010, the California Air Resources Board adopted its Renewable Electricity Standard regulations, which require all of the state's load-serving entities to meet this target. Additional energy efficiency measures are needed to meet these goals as well as the AB 32 greenhouse gas (GHG) reduction goal of reducing statewide GHG emissions to 1990 levels by 2020 (see Sections 3.11 and 4.11, Greenhouse Gas Emissions, for a discussion of AB 32).

California's energy goals include reducing energy use in existing homes and commercial buildings, generating one-third of the state's electricity using renewable resources, decreasing petroleum dependence through the use of alternative transportation fuels and vehicles, and reducing greenhouse gas emissions to 1990 levels by 2020.⁷ Energy efficiency is one of the state's priority goal because it has the biggest potential for long-term and lasting energy savings, and California's energy efficiency policies over the last 30 years have saved California consumers more than \$56 billion in energy costs.

Current Energy Providers

Pacific Gas and Electric Company

Electricity in San Francisco is primarily provided by PG&E and the San Francisco Public Utilities Commission (SFPUC). In 2010, electricity consumption in San Francisco was approximately

³ California Energy Commission, *Energy Almanac, California's Major Sources of Energy*, available online at http://energyalmanac.ca.gov/overview/energy_sources.html, accessed May 3, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ California Energy Commission, "2006 Net System Power Report," April 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁵ California Energy Commission, *Energy Almanac, California's Major Sources of Energy*, available online at http://energyalmanac.ca.gov/overview/energy_sources.html, accessed May 3, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country.

⁷ California Energy Commission, "2010 Integrated Energy Policy Report Update," CEC-100-2010-001-CMF. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

6.1 million megawatt-hours (MWh). Of this total, PG&E produces approximately 73 percent of electricity distributed (4.5 million MWh; about 79 percent of San Francisco's electricity-driven GHG emissions) and the SFPUC produces approximately 14 percent of electricity distributed (0.9 million MWh; about 0.01 percent of San Francisco's electricity-driven GHG emissions).⁸

The majority of land use projects in San Francisco are provided power by PG&E, whose 2010 power mix was as follows: 20 percent natural gas, 24 percent nuclear, 16 percent eligible renewables (described below), 16 percent large hydroelectric, 23 percent unspecified power, one percent coal, and one percent other fossil fuels.^{9,10}

Natural Gas

Natural gas is the cleanest of the fossil fuels used in the state and will continue to be a substantial energy source for the foreseeable future.¹¹ Estimates of recoverable shale reserves are as high as 842 trillion cubic feet, which would comprise a 37-year supply at today's consumption rates.

PG&E operates one of the largest natural gas distribution networks in the country, including 48,850 miles of natural gas transmission and distribution pipelines.¹² In all, PG&E delivers gas to approximately 4.3 million customer accounts in Northern and Central California, including San Francisco.

Transportation Fuels

California's transportation sector uses roughly half of the energy consumed in the state. In 2007, the California Energy Commission—in partnership with the California Air Resources Board and other state, federal, and local agencies—prepared the State Alternative Fuels Plan, which identifies strategies to increase the use of alternative fuels to meet California's goals for reducing petroleum consumption, improving energy security, and increasing in-state production of biofuels.

⁸ *Ibid.* Note: the remainder of the electricity consumption is derived from third party generators or other suppliers.

⁹ Pacific Gas & Electric (PG&E), "PG&E's 2010 Electric Power Mix Delivered to Retail Customers." Available online at: <http://www.pge.com/myhome/edusafety/systemworks/electric/energymix/>. Accessed June 10, 2013 (2013a).

¹⁰ Pending California Public Utilities Commission approval, PG&E would include a "Green Option" program that would allow customers an opportunity to pay into a program that may lead to the development of up to 250 MW of new clean energy projects in the PG&E service area. See PG&E, "New Green Option (Community Solar) FAQ." Available online at: <http://www.pge.com/about/environment/pge/greenoption/faq/>. Accessed June 10, 2013 (2013b).

¹¹ California Energy Commission, "2009 Integrated Energy Policy Report, Final Commission Report," December 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹² PG&E, Fast Facts, available online: <http://www.pge.com/en/about/company/profile/index.page>, accessed February 15, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

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3.21 Agricultural and Forest Resources

The Sunnydale and Velasco housing complexes are located within fully developed existing neighborhoods in an urbanized area of San Francisco. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies these sites and all of San Francisco as "Urban and Built-up Land."¹ The project site is designated as "urban land" by the United States Department of Agriculture Natural Resources Conservation Services.² No farmlands or forest land are identified within the city.

¹ California Department of Conservation (CDC), Important Farmland in California, ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_wallsize.pdf, accessed April 24, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² United States National Resources Conservation Service. Web Soil Survey, website: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, United States Department of Agriculture, accessed March 24, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

CHAPTER 4

Environmental Consequences

4.1 Impact Overview

4.1.1 Introduction

This chapter presents the analysis of the physical environmental effects of implementing the proposed Sunnydale-Velasco HOPE-SF Master Plan project or its alternatives as described in Chapter 2, Project Description. The analysis presented in this chapter has been prepared in accordance with Sections 15125 and 15126 of the California Environmental Quality Act (CEQA) Guidelines and the Council on Environmental Quality's National Environmental Policy Act (NEPA) Regulations (40 *Code of Federal Regulations* [CFR] 1502.16). This chapter assesses impacts, and identifies mitigation measures for significant impacts. This section describes the general scope, approach, and assumptions used in the impact analysis.

4.1.2 Organization

Chapter 4 addresses the full range of environmental topics required under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), listed in Chapter 3.1. Each section in Chapter 4 is organized as follows:

- **Regulatory Framework.** This subsection, where applicable, describes the relevant laws and regulations that apply to protecting the environmental resources within the project area and the governmental agencies responsible for enforcing those laws and regulations. As required by U.S. Department of Housing and Urban Development (HUD), specific statutory requirements of federal laws and authorities and other requirements discussed in 24 CFR § 58.5 and 58.6 were considered and are addressed in the various sections of Chapter 4. (For ease of reference, these applicable laws and regulations are grouped together in Chapter 5, Other NEPA / CEQA Considerations, Section 5.7, Other Federal Laws / Executive Orders.)
- **Impacts.** This subsection evaluates the potential for the proposed project to result in adverse effects on the physical environment described in each subsection of Chapter 3. This subsection identifies the significance of each impact based on topic-specific significance criteria.
 - *Context and Intensity Evaluation Guidelines under NEPA.* CEQ Regulations (40 CFR 1508.27) define significance of effects in terms of context and intensity. Context refers to the affected environment in which a proposed project occurs, which is described in Chapter 3 of this document. The “contextual” review means that the significance of an action must be analyzed in one or more of the various contexts of a proposed

action; such as society as a whole (human, national), the affected region, the affected interests, and the locality. Intensity refers to the severity of the effect, which is examined in terms of the type, quality, and sensitivity of the resource involved; location and extent of the effect; duration of the effect (short or long term); and other consideration of context. HUD has not established thresholds of significance, but it has set regulatory standards for various aspects of the human environment; such as exposure to noise and toxic contaminants. These standards are incorporated into the analysis of intensity in assessing significance. HUD has also issued guidance on assessing effects of proposed actions for certain environmental factors. This guidance has been incorporated into the discussion of intensity.

- ***Significance Criteria under CEQA.*** This section provide thresholds to define the level at which an impact would be considered significant in accordance with CEQA. These thresholds are based primarily on San Francisco Planning Department guidance regarding the environmental effects to be considered significant. This guidance is, in turn, based upon CEQA Guidelines Appendix G and the Planning Department's Initial Study checklist.
- ***Approach to Analysis.*** Where applicable, this section describes the general approach and methodology used to apply the significance criteria in evaluating the impacts of the project. The methodology provides the basis for the impact analysis, which could be either qualitative or quantitative, relative to the significance criteria. The methodology identifies use of applicable regulatory guidelines, thresholds, or standards, or in some cases, accepted professional practices or protocols used to assess the nature and severity of environmental impacts. This section also describes if and why any of the significance criteria do not apply to the proposed project; those significance criteria are not discussed further.
- ***Proposed Project*** presents project-specific analysis of impacts of the proposed project (the "proposed action" in the common language of NEPA review). The project considerations used in this analysis are based on the project description as presented in Chapter 2. Each of the numbered impact statements is followed by discussion and analysis of the various components of the proposed project with potential for physical environmental effects. The conclusion of each impact analysis is expressed in terms of the impact significance, which is discussed further below. For significant or potentially significant impacts, feasible project-specific mitigation measures, numbered corresponding to the impact number, are listed. Mitigation Measure descriptions are included in a separate section near the end of the chapter.
 - Under a sub-heading, this section includes an analysis of the environmental impacts of the project variant, described in the Project Description on page 2-11, and whether it would result in substantially different impacts from those of the proposed project.
- ***Alternative A*** and ***Alternative B*** present specific analysis of impacts of the Reduced Development / Density Alternative (Alternative A) and One-for-One Replacement Alternative (Alternative B), respectively. The impact numbering format is repeated from the analysis of the *Proposed Project* section to allow for comparison of impacts among the project and alternatives. Each impact is also designated with each alternative. For example, the second Land Use impact is designated as follows:
 - Proposed project: **Impact LU-2**

- Alternative A: **Impact A-LU-2**
- Alternative B: **Impact B-LU-2**
- To avoid repetition, especially in cases in which impacts would be similar or lesser than those of the proposed project, these analyses reference the analysis of the *Proposed Project* section. Mitigation Measures are identified, where applicable.
- *Alternative C*. Impacts of the No Action Alternative are summarily described in this section.
- **Cumulative Impacts.** This section considers the effects of the proposed project, variant, or alternatives together with potential effects of other past, present, or reasonably foreseeable future projects in the project vicinity. Reasonably foreseeable future projects are described in Chapter 1, Nearby Planning Efforts, as known through 2030, 2035, or 2040, depending on the impact category under discussion. The analysis of cumulative impacts under each resource topic is based on the same setting, regulatory framework, and significance criteria as the direct impacts. Additional mitigation measures are identified if the analysis determines that the project's contribution to a cumulative, adverse impact would be considerable (i.e., significant). Impacts are designated beginning with the double-letter 'CC,' such as **CC-LU-1** for cumulative land use impacts. Given many impacts are consistent among the proposed project, variant, and Alternatives A and B, one cumulative impact discussion is presented. Where cumulative impacts would be different for Alternatives A and/or B, it is noted. Alternative C would not contribute to any cumulative impacts; therefore, it is not discussed, and Alternative C is concluded to have *no impact* for each cumulative impact category.
- **Mitigation Measures.** For impacts determined to be significant and mitigation measures identified in the above sections, this subsection describes the mitigation measures that could avoid or lessen the severity of the impact. The project sponsor has reviewed the proposed mitigation measures and will recommend that the decisionmakers adopt them if the project is approved.

4.1.3 Significance Determinations

The purpose of this EIR/EIS is to identify the significant effects on the environment of a project or its alternatives, and to indicate the manner in which those significant effects can be mitigated or avoided. The conclusion of each impact analysis provides a significance determination to indicate if mitigation measures are warranted. This Draft EIR/EIS uses the following terminology to denote the significance of environmental impacts of the proposed project or its alternatives:

- **No Impact.** An impact is considered not applicable (no impact) if there is no potential for impacts, or if the environmental resource does not occur within the project area or the area of potential effect. For example, there would be no impacts related to grading if there is no grading proposed at a particular project site. "No Impact" also includes instances in which the project may have a beneficial impact under NEPA, but such beneficial impacts are not specifically identified under CEQA.
- **Less-than-Significant Impact.** This determination applies if there is a potential for some limited adverse impact, but not a substantial adverse effect that qualifies under the significance criteria as significant. No mitigation is required for impacts determined to be less than significant.

- **Less-than-Significant Impact with Mitigation.** This determination applies if the project would or could potentially result in a significant adverse effect when evaluated with one or more significance criteria, but feasible mitigation is available that would reduce the impact to a less-than-significant level.
- **Significant Unavoidable Impact with Mitigation.** This determination, pursuant to CEQA only, applies if the project would result in a significant adverse effect when evaluated with one or more significance criteria, but there is no feasible mitigation available to reduce the impact to a less-than-significant level. There might be some feasible mitigation measure(s) that would lessen the impact, but the residual effect after implementation of the measure would remain significant, and therefore the impact is considered significant and unavoidable.

For NEPA, effects are found to be Significant and Unavoidable, discussed below, with or without mitigation.

- **Significant Unavoidable Impact.** This determination applies if the project would result in a significant adverse effect when evaluated with one or more significance criteria, but there appears to be no feasible mitigation available to reduce the impact to a less-than-significant level, or implementation of the mitigation measure is not within the control of the project sponsor(s). Therefore the impact is considered significant and unavoidable.
- **Significant and Beneficial.** This determination, pursuant to NEPA only, applies if the project would result in a significant beneficial effect when evaluated with one or more significance criteria. Given the effect is not adverse, no mitigation is required.’

Under CEQA, impacts are not found to be beneficial.

4.1.4 Senate Bill 743/Public Resources Code 21099

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014.¹ Among other provisions, SB 743 amends the CEQA by adding *Public Resources Code* Section 21099 regarding analysis of aesthetics and parking impacts for urban infill projects.²

Aesthetics and Parking Analysis

Public Resources Code Section 21099(d), effective January 1, 2014, provides that, “aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.”³ Accordingly, aesthetics and parking are no longer to be considered in determining

¹ SB 743 can be found on-line at: http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB743.

² San Francisco Planning Department, Memorandum from Viktoriya Wise to San Francisco Planning Commission, *CEQA Update: Senate Bill 743 Summary – Aesthetics, Parking and Traffic*, November 26, 2013. The memorandum can be found on-line at: [http://sfmea.sfplanning.org/CEQA Update-SB 743 Summary.pdf](http://sfmea.sfplanning.org/CEQA%20Update-SB%20743%20Summary.pdf).

³ A “transit priority area” is defined in as an area within one-half mile of an existing or planned major transit stop. A “major transit stop” is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:⁴

- a) The project is in a transit priority area; and
- b) The project is on an infill site; and
- c) The project is residential, mixed-use residential, or an employment center.

The proposed project meets each of the above three criteria: it is in a transit priority area because of the location within one-half mile of a major transit stop (the 8X and 9 buses stop at the intersection of Sunnysdale Avenue and Santos Streets); it is an infill site because it's located on a previously developed site in an urban area; and it is a mixed-use residential project.⁵ Thus, this document does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA. However, the project's visual and parking effects are analyzed under NEPA. As such, those analyses are presented in this document. The visual analysis, provided pursuant to NEPA, also provides information that may be used in the case report for the project in determining the consistency with policies of the Urban Design Element of the *General Plan*.

Public Resources Code Section 21099(e) states that a Lead Agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. Therefore, there is no change in the Planning Department's methodology related to design and historic review.

⁴ See Public Resources Code Section 21099(d).

⁵ San Francisco Planning Department, Draft Transit-oriented Infill Project Eligibility Checklist, August 3, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

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4.2 Plans and Policies

In accordance with CEQA Guidelines Section 15125(d), this EIR/EIS provides a summary of the plans and policies relevant to the proposed project. Section 3.2, Plans and Policies, analyzes whether the proposed project, or its alternatives, would conflict with applicable plans and policies.

The primary discussion of regulations pertinent to the proposed project and their environmental effects are included in this chapter (Chapter 4) under the regulatory framework subsection of each environmental topic.

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4.3 Land Use and Land Use Planning

4.3.1 Regulatory Framework

Regulations applicable to land use are discussed in Section 3.2, Plans and Policies.

4.3.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

A significant adverse land use impact would result if the proposed action or would be:

- Inconsistent with applicable land use plans and policies; or
- Incompatible with surrounding development.

Significance Criteria under CEQA

Implementation of the proposed project or alternatives would have a significant effect on land use if it would:

- 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Have a substantial adverse impact on the existing character of the vicinity.

A conflict between a proposed project and a *General Plan* policy does not necessarily indicate a significant effect on the environment under CEQA. The staff report for the Planning Commission will analyze the project's consistency with *General Plan* policies and zoning, and will discuss any exceptions requested or modifications required. Additionally, Section 3.2, Plans and Policies, provides a complete description of the plans and policies relevant to the proposed project. As a result, the impact analysis below does not evaluate inconsistencies between the proposed project and *General Plan* policies that do not relate to physical environmental impacts, although relevant sections of this Draft EIR/EIS analyze physical environmental impacts that could result from such conflicts.

Proposed Project

Impact LU-1: Effects Related to Physical Division

NEPA: This impact criterion is not applicable under NEPA. Please see Section 4.5, **Socioeconomics / Population & Housing**, for an analysis of socioeconomic effects related to physical barriers or isolation of a particular group, as well as effects from displacement.

CEQA: The proposed project would not physically divide an established community. (Less than Significant)

This analysis determines whether the proposed project, as built out, would physically divide an established community. The proposed project would demolish the existing residential buildings on the project site and replace them with new buildings, some of which would include community services and retail uses. These construction activities could close portions of the project site. These closures would be temporary and would not result in substantial physical division of the community.

The proposed project would demolish the existing 94 two-story buildings on the project site and replace them with 37 two- to four-story development blocks. The new buildings would be primarily residential and would include a two-story community center with indoor recreational facilities and office space for community services. The new senior housing building would be four stories with some retail and community services on the ground floor. The residential use of the project site would intensify. There are multiple locations throughout the City where two- to four-story residential neighborhoods are adjacent to one- to two-story residential neighborhoods, and many neighborhoods where buildings of these varying heights are intermixed. These different intensities of residential activity do not present a substantial land use conflict.

The existing street layout has curving streets with few intersections and does not create many connections within the neighborhood or the surrounding neighborhoods. The proposed project includes a new street network within the project site that straightens out the existing streets, creates smaller blocks than currently exist, and allows for easier access to the surrounding neighborhood, including through a realignment of Blythedale Avenue to connect with the existing Sunrise Way cul-de-sac and a new connection to Hahn Street via the proposed Center Street. The project would also provide new pedestrian linkages to the existing Herz Playground entrances to the north and to McLaren Park to the west and may include additional crosswalks and sidewalks. The new linkages would remove some existing barriers to movement created by the current site layout. No physical barriers between neighborhoods would be constructed as part of the proposed project.

The impact would be *less than significant* under CEQA because the proposed project would not physically divide an established community.

Mitigation: None required.

Impact LU-2: Effects Related to Plan Consistency

NEPA: The proposed project would not be inconsistent with applicable land use plans and policies. (Less than Significant)

CEQA: The proposed project would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

Land use plans and policies designate the location and use of development—including the *San Francisco General Plan* and *Planning Code*. Environmental plans and policies are those, like the *BAAQMD 2010 Clean Air Plan*, which directly address environmental issues and/or contain targets or standards, which must be met in order to preserve or improve characteristics of the City's physical environment.

Detail regarding the proposed project's potential conflicts with the *San Francisco General Plan* is provided in Section 3.02, Plans and Policies. Regarding the *Planning Code*, the project site is currently zoned RM-1, Residential District, Mixed (Apartments and Houses), Low Density and within a 40-X height and bulk district. The RM-1 zone is described in *Planning Code* Section 206.2 as containing a mixture of single-family and multi-family homes, including apartment buildings. The existing density of development is approximately 1 unit per 2,400 square feet of lot area with buildings that are moderate in scale and segmented with separate entrances. Building heights do not exceed 40 feet. Outdoor space can be available at ground and upper levels of the project site. The RM-1 zoning also allows recreational uses as a principal use, and allows one dwelling unit per 800 square feet of lot area, for a total allowable density of 2,286 units. RM-1 zoning also allows community facilities and some institutional uses, such as schools and churches, as conditional uses.

The project, as proposed, would include approximately 1,700 dwelling units (less than that permitted under the current RM-1 zoning) and recreational and educational facilities, community and resident services for youth through seniors, open space including park spaces and community gardens, all permitted as either principal or conditional uses in the RM-1 district. The project also proposes some retail uses and office space which are not allowed, even with conditional use authorization, under the present zoning. The project would exceed the maximum 40-foot height limit at select locations. As stated in Chapter 2, the proposed project would require a Special Use District (SUD) designation for the project site and an amendment of the Zoning Map (rezoning) to increase the height limit for at least portions of the site, both of which would require approval from the San Francisco Board of Supervisors upon the recommendation of the Planning Commission.

Therefore, the project, if approved, would be ultimately consistent with the applicable zoning regulations.

The physical environmental effects of the proposed project's conflict with applicable plans and policies are documented throughout this EIR/EIS. See section 3.2, Plans and Policies, for a

discussion of the project's consistency with other applicable plans. As stated there, the project would not conflict with plans or policies adopted for the purpose of avoiding or mitigation environmental effects. For example, as further described in Section 4.11, the project would be consistent with the City's Greenhouse Gas Reduction Strategy, which would ensure that the project is consistent with the City's Sustainability Plan and Climate Action Plan. As further described in Section 4.5, the project would not be inconsistent with ABAG growth projections or with Plan Bay Area. And as analyzed in Section 4.10, the project would be consistent with the BAAQMD 2010 *Clean Air Plan*. See also Section 4.16, which explains that the project would be consistent with the City's Bird-Safe Building Guidelines, and Section 4.09, which explains that the proposed project, with identified mitigation, would meet local noise standards.

Therefore, this impact would be *less than significant* under NEPA because the proposed project would not be inconsistent with applicable land use plans and policies.

Therefore, this impact would be *less than significant* under CEQA because the proposed project would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation: None required.

Impact LU-3: Effects on Existing Character

NEPA: The proposed project would not be incompatible with surrounding development. (Less than Significant)

CEQA: The proposed project would not have a substantial adverse effect on the existing character of the project site and vicinity. (Less than Significant)

As noted in Chapter 1, Sunnydale-Velasco is removed from the city and the rest of Visitacion Valley by topography, the unusual street pattern, and by its barracks-like building design and layout. The existing site layout creates ill-defined open spaces between each building. The large blocks and curvilinear street plan create large amounts of undefined and unprogrammed open space. As noted above, the project would improve connections between the project site and the surrounding neighborhood. The proposed project includes a new street network within the project site that straightens out the existing streets, creates smaller blocks than currently exist, and allows for easier access to the surrounding neighborhood, including through a new connection between the project site and an existing Sunrise Way cul-de-sac, just west of Hahn Street and a new connection to Hahn Street just south of Sunnydale Avenue (see Figure 2-3). The project would also provide enhanced pedestrian linkages to the existing Herz Playground entrances to the north and may include additional crosswalks and sidewalks. Changes to site access proposed by the project would not result in a substantial adverse change to the existing site character.

The proposed project's uses would not conflict with the predominantly residential neighborhood to the south and east of the project site. The proposed project would not introduce uses that are not already present in the vicinity. The buildings under the proposed project would be between two and four stories tall. Site-wide residential density would more than double. At completion of Master Plan buildout, the project site would have 1,700 units over 48.8 acres (about 35 units per acre, compared to 16 units per acre under existing conditions). Non-residential uses—including neighborhood-serving retail and additional community services space—would also be provided, along with new parks and open space. These larger buildings would increase the intensity of residential use compared to existing conditions, but these apartment and single-family uses would be consistent with the existing two-story and three-story residential uses to the south and east, and with the existing multi-family housing units on the project site.

The project's non-residential uses would complement the existing surrounding development. The new community center at the northwest corner of Sunnysdale Avenue and Hahn Street would serve both the proposed project and the surrounding neighborhood, providing a central gathering place to facilitate the interconnectedness of uses in the area. Proposed parks and open spaces along Santos Street and Sunnysdale Avenue would create defined areas for recreational gathering, in contrast to the unprogrammed and sparsely vegetated communal open spaces between the existing buildings on the project site.

The impact would be *less than significant* under NEPA because the proposed project uses would not be incompatible with surrounding development.

The impact would be *less than significant* under CEQA because the proposed project's uses would not have a substantial adverse effect on the existing character of the project site and vicinity.

Mitigation: None required.

Proposed Project Variant

The project variant's building envelope would be the same as under the proposed project. In addition, the land uses would not substantially differ between the project variant and the proposed project. Therefore, land use impacts would be *less than significant* under both CEQA and NEPA.

Alternative A: Reduced Development / Density Alternative

Impact A-LU-1: Effects Related to Physical Division

NEPA: This impact criterion is not applicable under NEPA. Please see Section 4.5, **Socioeconomics / Population & Housing**, for an analysis of socioeconomic effects related to physical barriers or isolation of a particular group.

CEQA: The Reduced Development / Density Alternative would not physically divide an established community. (Less than Significant)

The Reduced Development / Density Alternative would be located within the same boundary as the proposed project, as well as include the same street layout and a similar built envelope. Construction activities could close portions of the project site. These closures would be temporary and would not result in substantial physical division of the community. The alternative's intensity of residential uses would be somewhat less than under the proposed project, but the mix of residential, community-serving, retail and open spaces uses would otherwise be substantially similar to those proposed under the project. These uses would not physically divide an established community. To the contrary, they would facilitate integration of the project site further into the Visitacion Valley neighborhood to the east and south.

The impact would be *less than significant* under CEQA because the alternative would not physically divide an established community.

Mitigation: None required.

Impact A-LU-2: Effects Related to Plan Consistency

NEPA: The Reduced Development / Density Alternative would not be inconsistent with applicable land use plans and policies. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

As stated above, land use plans and policies designate the location and use of development—including the *San Francisco General Plan* and *Planning Code*. Environmental plans and policies are those, like the *BAAQMD 2010 Clean Air Plan*, which directly address environmental issues and/or contain targets or standards, which must be met in order to preserve or improve characteristics of the City's physical environment.

The project's potential conflicts with the *General Plan* are described in Section 3.02. Regarding the *Planning Code*, the alternative would include approximately 1,372 dwelling units, but would otherwise be similar to the proposed project in its mix of uses and their locations. The alternative's

retail uses and office space uses would not be permitted under the current RM-1 zoning district, and some of its buildings would exceed the maximum 40-foot height limit for the current 40-X height and bulk district. Therefore, the alternative would conflict with existing zoning. The physical environmental effects of these conflicts are documented throughout this EIR/EIS.

The alternative would require an SUD designation for the project site. This SUD would permit the retail uses and height limit modifications at select locations. The elements of the current *Planning Code* that would be modified by the SUD are not Code provisions adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the alternative, if approved, would be ultimately consistent with the applicable zoning regulations.

Given the alternative would develop the site to a lesser density than would the proposed project, but otherwise be consistent in terms of use and layout, the alternative would not conflict with plans or policies adopted for the purpose of avoiding or mitigation environmental effects, such as the City's Greenhouse Gas Reduction Strategy, Sustainability Plan, Bird-Safe Building Guidelines, and Climate Action Plan (see Section 4.11); Plan Bay Area (see Section 4.5); the *2010 Clean Air Plan* (see Section 4.10).

Therefore, this impact would be *less than significant* under NEPA because the alternative would not be inconsistent with applicable land use plans and policies.

Therefore, this impact would be *less than significant* under CEQA because the alternative would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation: None required.

Impact A-LU-3: Effects on Existing Character

NEPA: The Reduced Development / Density Alternative would not be incompatible with surrounding development. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not have a substantial adverse effect on the existing character of the project site and vicinity. (Less than Significant)

The Reduced Development / Density Alternative's street layout would be the same as the proposed project's, creating smaller blocks and more connections to the surrounding neighborhood and would not result in a substantial adverse change to the existing site character.

The alternative's proposed uses would not be incompatible with the residential uses south and east of the project site. The alternative would result in an increase in intensity of residential uses to about 28 units per acre (from 16 units per acre under existing conditions), but not to the same extent as the proposed project. The two- to four-story buildings constructed under the alternative would not be inconsistent with the existing one- and two-story residential uses nearby.

The alternative would also include non-residential uses, which would complement the existing surrounding development in the same manner as they would under the proposed project. The new community center and open spaces would serve the alternative, as well as the surrounding neighborhood. These uses would not have a substantial adverse effect on the existing character of the area.

The impact would be *less than significant* under NEPA because the alternative uses would not be incompatible with surrounding development.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not substantially conflict with the existing character of the project site and vicinity.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-LU-1: Effects Related to Physical Division

NEPA: This impact criterion is not applicable under NEPA. Please see Section 4.5, Socioeconomics / Population & Housing, for an analysis of socioeconomic effects related to physical barriers or isolation of a particular group.

CEQA: The One-for-One Replacement Alternative would not physically divide an established community. (Less than Significant)

The One-for-One Replacement Alternative would involve demolition and reconstruction of all of the buildings on the project site, including all 785 existing public housing units. The buildings would be replaced in their same locations and would have the same floor plans as those that currently exist. The 785 units would remain affordable housing. There would be no change in the project site's street layout or existing connections to the surrounding community. Construction activities could close portions of the project site. These closures would be temporary and would not result in substantial physical division of the community.

Operationally, the One-for-One Replacement Alternative would physically function in the same configuration as under existing conditions. There would be no new physical barriers introduced by the alternative. Although the project site would remain somewhat disconnected from the surrounding community due to the few street connections to the east and south, as well as the fenced Gleneagles Golf Course to the north, this disconnection would be a continuation of the current condition. No new barriers would be constructed under this alternative.

The impact would be *less than significant* under CEQA because the alternative would not physically divide an established community.

Mitigation: None required.

Impact B-LU-2: Effects Related to Plan Consistency

NEPA: The One-for-One Replacement Alternative would not be inconsistent with applicable land use plans and policies. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (Less than Significant)

The One-for-One Replacement Alternative would result in the same uses at the project site, as well as the same physical layout of the project site, as under existing conditions. The alternative would develop substantially fewer residential units than the proposed project.

Like the existing development at the project site, the alternative would be consistent with existing plans and policies. The redevelopment of 785 units would be consistent with the *General Plan* and RM-1 zoning. New buildings would meet greater energy efficiency standards, as well as biological protection requirements, and therefore would meet the requirements of the Greenhouse Gas Reduction Strategy, Climate Action Plan, Sustainability Plan, and Bird-Safe Building Guidelines. As explained in Section 4.10, the alternative would be consistent with the *2010 Clean Air Plan*.

The impact would be *less than significant* under NEPA because the alternative would not be inconsistent with applicable land use plans and policies.

This impact would be *less than significant* under CEQA because the alternative would not 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, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Mitigation: None required.

Impact B-LU-3: Effects on Existing Character

NEPA: The One-for-One Replacement Alternative would not be incompatible with surrounding development. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not have a substantial adverse effect on the existing character of the project site and vicinity. (Less than Significant)

Construction of the alternative would result in temporary effects on the land use character of the project site and vicinity. Operationally, the alternative would result in a substantially similar character to the existing character of the project site. Although the building stock would be new, the land uses at the project site would not change from existing conditions. The existing land use relationships and context would continue under this alternative.

The impact would be *less than significant* under NEPA because the alternative uses would not be incompatible with surrounding development.

The impact would be *less than significant* under CEQA because the alternative would not result in a substantial adverse effect on the existing character of the project site and vicinity.

Mitigation: None available.

Alternative C: No Action Alternative

Under the No Action Alternative, the existing uses and buildings at the project site would remain. There would be no change in the street layout or other physical activities that would alter the land use character or create physical divisions in the community, and the relative isolation from the surrounding communities would continue. Current consistency with land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect would be unchanged. The continuation of existing conditions would not result in a significant impact associated with the conflict of plans or policies adopted for the purpose of avoiding or minimizing an environmental effect. There would be *no impact* under both CEQA and NEPA.

4.3.3 Cumulative Impacts

Impact CC-LU: Cumulative Effects on Land Use

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts. (Less than Significant)

Proposed Project, Variant, and Alternative A

The cumulative effects analysis considers the surrounding neighborhood where land use and policy controls would be affected by the project or cumulative development. As stated in Chapter 1, Purpose and Need, and Section 3.03, Environmental Setting, the 700-acre Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project is located about two miles to the east of the project site. The Valley/Schlage Lock SUD is approximately 1 mile to the east of the project site. In addition, the Executive Park Sub Area Plan SUD (SUD) is planned for the approximately 70-acre area between Candlestick Point and Highway 101.

All three of these plans envision a mix of residential and commercial uses. In combination with the proposed project and its alternatives, cumulative development would increase residential

intensity of use in the southeast area of the City. This increased residential density and uses would not physically divide the established community or result in a substantial adverse effect on land use character. To the contrary, the expanded geographic scope of residential uses, as well as the increased intensity of residential use, along with supporting retail and related uses, would activate lower-density or underdeveloped areas within the southeast quadrant of San Francisco.

These cumulative mixed-use developments have required, or would require, amendment of land use plans—such as the *General Plan* and the *Planning Code*—the amendments would permit the neighborhood mix of residential and retail services at a density necessary to achieve broader city goals for redevelopment of substandard affordable housing, increased residential density and mixed-income neighborhoods, and redevelopment of underutilized land in the southeastern portion of the city. Each cumulative project would be required to be consistent with applicable plans or policies adopted for the purpose of avoiding or mitigating an environmental effect, such as the *2010 Clean Air Plan* or the San Francisco Noise Ordinance. If necessary, mitigation measures would be identified to reduce impacts.

In addition to these development plans, the San Francisco Recreation and Park Department has awarded a grant to SF Urban Riders for the first phase of construction of an off-road bicycle skills park on the north side of Sunnydale Avenue immediately west of the Sunnydale-Velasco project site. The park would contain bike trails, jumps, berms, and mounds, as well as a downhill course and other features. This project has not undergone environmental review and has not obtained Planning Department or Commission approvals.

The proposed location of the bike skills park is within McLaren Park and is used as a materials storage location for park maintenance, as well as for passive recreation. The bike park use would be an active use that would attract more recreational users to this location of McLaren Park, which sees relatively fewer visitors than the programmed playground locations on the park's northern side. Active recreational use of the bike park site would not conflict with the surrounding land use character, nor would it divide the established community.

For the proposed project, variant, and Alternative A, cumulative land use impacts would be ***less than significant*** under NEPA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.

For the proposed project, variant, and Alternative A, cumulative land use impacts would be ***less than significant*** under CEQA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative land use impacts.

Alternative B

Alternative B would result in land uses and a built layout almost identical to existing conditions. As such, it would not contribute to cumulative land use impacts, and there would be ***no impact***.

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4.4 Visual Quality / Aesthetics

4.4.1 Regulatory Framework

Federal

Wild and Scenic Rivers [16 U.S.C. 1271, Sec. 7(b),(c)]

The National Wild and Scenic Rivers System protects rivers designated for their wild, scenic, or recreational values.¹ It applies to rivers designated under the Act and proposed activity affecting rivers on the Nationwide Inventory of potential wild, scenic and recreational rivers. The United States Department of Housing and Urban Development (HUD) requires that NEPA analyses determine whether HUD federal actions affect such rivers. There are no wild or scenic rivers on the project site or in the project site vicinity.

State

There are no State regulations, plans, or policies applicable to the aesthetic issues of the proposed project. While no Officially Designated State Scenic Highways exist within the borders of the City of San Francisco, Interstate 280 (I-280) is the closest Eligible State Scenic Highway to the project site. The portion of I-280 in San Mateo County is an officially designated State Scenic Highway.² The project site is located approximately 1.25 miles south, and 1.5 miles east, of I-280 and is not visible from the highway.

Regional and Local

San Francisco General Plan

The *San Francisco General Plan (General Plan)*, adopted by the Planning Commission and the Board of Supervisors, is the embodiment of the City's collective vision for the future of San Francisco. The *General Plan* comprises a series of elements that apply Citywide. The element that applies to visual quality is the Urban Design Element, as outlined in Chapter 3, Plans and Policies.

San Francisco Planning Code

The *Planning Code*--which incorporates by reference the City's zoning maps--implements the *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: (1) the proposed project conforms to the *Planning Code*, (2) allowable exceptions are granted pursuant to provisions of the *Planning Code*, or (3) amendments to the *Planning Code* are

¹ United States Forest Service. *National Wild and Scenic Rivers System: September 2009 (Map)*, United States Department of Agriculture, available online: <http://www.rivers.gov/rivers/california.php>, accessed April 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² California Scenic Highway Mapping System, http://www.dot.ca.gov/hq/LandArch/scenic_highways/, accessed on March 26, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

approved as part of the project. The *Planning Code* provides location-specific development and use regulations that govern density and configuration of buildings.

Per the *Planning Code*, the project site is currently zoned RM-1. Under Section 206.2 of the San Francisco *Planning Code*, RM-1 is defined as Residential, Mixed-Use – Low Density. RM-1 Districts contain a mixture of dwelling types including those found in the RH (Residential, House) Districts and apartment buildings in a variety of structures and a range of unit sizes. RM-1 Districts tend to have a low overall unit density, with structures rarely exceeding 40 feet in height. The project site is within a 40-X Height and Bulk District, which sets building height limits at 40 feet, with no bulk restriction. Properties in the project vicinity (several blocks to the east, west, and north of the project site, with some exceptions) are also in the 40-X height and bulk district.

Section 311 of the *Planning Code* contains the San Francisco Residential Design Guidelines, which have broad application to visual / aesthetic concerns. As stated in the guidelines, they “articulate expectations regarding the character of the built environment and are intended to promote design that will protect neighborhood character, enhancing the attractiveness and quality of life in the City. The Guidelines address basic principles of urban design that will result in residential development that maintains cohesive neighborhood identity, preserve historic resources, and enhances the unique setting and character of the City and its residential neighborhoods. The Guidelines also suggest opportunities for residential designs to further San Francisco’s goal of environmental sustainability.”

The San Francisco *Planning Code* contains a number of provisions to reduce or prevent light and glare in the City. This includes the aforementioned Residential Design Guidelines, Section 312 and the Neighborhood Commercial Design Guidelines, as well as the Industrial Area Design Guidelines. Moreover, Planning Commission Resolution 9212 prohibits the use of mirrored or reflective glass.

San Francisco Public Works Code Article 16, Urban Forestry Ordinance

The Urban Forestry Ordinance establishes protections for the City’s trees. The two categories receiving the highest protection are the City’s Significant and Landmark Trees. The City currently considers Significant Trees as street trees and private trees that meet certain criteria under Section 810A of the *Public Works Code*. Removal of any of these trees requires a permit. Landmark Trees have the highest level of protection in the City. These are trees that meet criteria for age, size, shape, species, location, historical association, visual quality, or other contribution to the City’s character and have been found worthy of Landmark status after public hearings at both the Urban Forestry Council and the Board of Supervisors. Temporary landmark status is also afforded to nominated trees currently undergoing the public hearing process.

4.4.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

Implementation of the proposed project or its alternatives would have a significant effect on visual quality if it would:

- Substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources, or
- Introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area.

Significance Criteria under CEQA

As explained in Section 4.1, Impact Overview, *Public Resources Code* 21099 provides that “aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment” under CEQA.³ The proposed project meets these criteria. Accordingly, aesthetic impacts are not considered in this CEQA analysis.

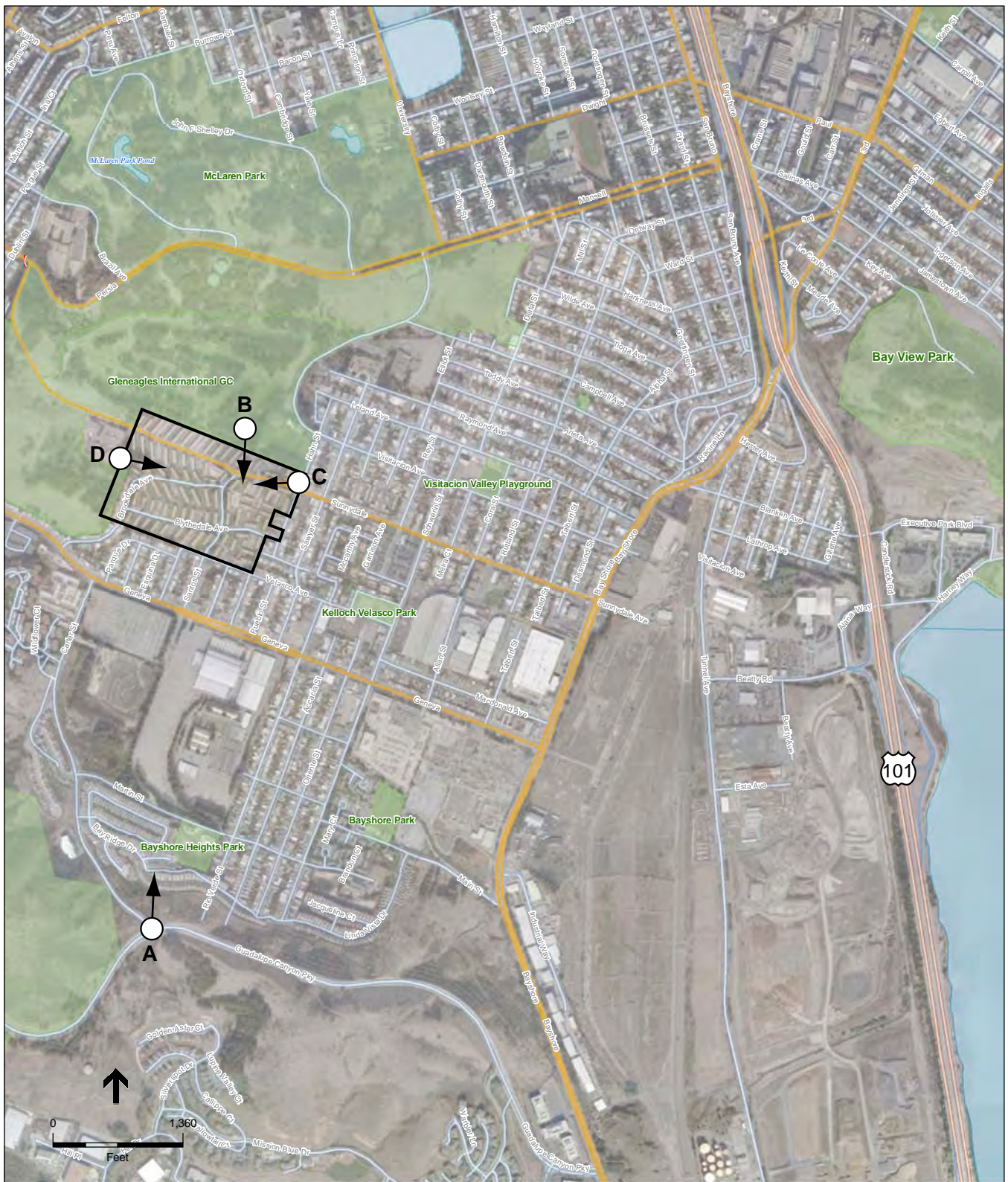
Approach to Analysis

This analysis focuses on the visual effects of the proposed project and its alternatives. Most alternatives (with the exception of the No Project Alternative) include removal of the existing Sunnydale and Velasco public housing complexes and their replacement with new housing, infrastructure, open space and community amenities. The analysis includes the effects associated with height and density increases, tree removal, changes in views to and from the project site, and light and glare impacts associated with new lighting. The section assesses the potential visual effects based on field reconnaissance and the review of photographs of existing conditions from key viewpoints.

In addition, visual simulations have been prepared to assist in analyzing the potential effects of the project and alternatives. Although the exterior building features, including cladding materials, fenestration patterns, paint palette and other architectural elements have not yet been determined, the visual simulations provide existing and representative post-construction views from four selected vantage points, as shown in **Figure 4.4-1**. Selection of the four vantage points, listed below, was based on previously identified viewer locations or roadways, and on vantage points that were identified during the scoping process:

- *Viewpoint A*: Intersection of Guadalupe Canyon Parkway and Carter Street, looking north;
- *Viewpoint B*: Herz Playground (just north of the project site), looking south;

³ See Public Resources Code Section 21099(d).



— Project Site

SOURCE: Microsoft Virtual Earth, 2010

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project
Figure 4.4-1
 Visual Simulation Viewpoint Location Map

- *Viewpoint C:* Intersection of Hahn Street and Sunnydale Avenue (just east of the project site), looking west;
- *Viewpoint D:* Along Brookdale Avenue, north of its intersection with Blythedale Avenue (at the bend in the road), looking east.

The analysis below describes visual simulations for the proposed project only, and not for the project variant or any of the project alternatives. However, the views under the project variant would be identical to those associated with the proposed project, since the project variant proposes a different mix of units but would maintain the same building envelope (i.e., same number of buildings in the same size and configuration). Moreover, the proposed project would result in the most intensive development when compared to Alternative A, Reduced Development/Density Alternative and Alternative B, One-for-One Replacement Alternative. This is because both of these alternatives propose to construct buildings of smaller size and an overall lower development intensity. Therefore, in terms of assessing visual effects, the visual simulations of the proposed project present the most conservative option of what could be developed on the site by illustrating the most substantial change from existing conditions. Although visual simulations for the alternatives are not provided, the discussion below addresses the types of views that would be available if any of the alternatives were to be implemented instead of the proposed project.

Proposed Project

Impact AE-1: Effects on Views

NEPA: The proposed project would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources. (Less than Significant)

CEQA: The topic is not applicable under CEQA for this project.

Construction

The Proposed Project would be constructed in three major phases over approximately 9 to 15 years. During this time, occupants of existing residences--as well as residents in the immediate vicinity--would experience changes to certain views, including possible partial obstructions of short and mid-range views of the site's interior and the surrounding areas, and of the long-range views through Visitacion Valley and of the Bay. Moreover, some residents located on the project site and nearby would likely experience views of construction vehicles and equipment within the proposed construction staging areas. Such views could include elements such as exposed building pads, storage trailers, open trenches, debris piles, roadway bedding and equipment, and structures in different phases of construction. Staging could also spillover into areas immediately surrounding the project area, including roadways.

Although the total construction period for this project would be considered long by most standards, the construction of each individual phase would last less than 5 years, which would be similar in duration to other similar large-scale projects throughout the city. During each phase, construction staging would be largely limited to the area of the phase being developed (and immediately surrounding areas) and would not be expected to extend over the entire project site. Where present,

most construction vehicles and equipment would not be located or extend to a height that would obstruct views of nearby natural resources or scenic vistas because views from the project site are typical of an urban setting and any views of the surrounding hillsides and the Bay would continue to be available from other portions of the project site not undergoing construction. Therefore, it is expected that, while some disturbance to local views may occur during the construction period, many of the existing views through the project site that are currently available to residents would continue to be available during the construction period. In addition, the construction contractor would be required to control the cleanliness of the construction areas, reducing any potential visual impacts associated with construction-related debris.

While construction activities would introduce visual elements that would be out of character with the predominantly residential uses at the project site, compliance with common construction practices such as daily maintenance and construction debris and waste disposal would ensure that the project would not have a substantial adverse effect on a scenic vista or reduce public opportunities to view scenic resources.

Operation

The proposed project would alter views of the project site by replacing the 97 two-story buildings with 34 new two- to- four-story structures containing a mix of building types, including townhouses/rowhomes (attached, multistory, single-family homes), stacked flats (one-story apartments arranged one over the other), podium buildings (buildings with a parking garage below and residences or other uses above), corridor buildings (apartment buildings with units accessed from a central corridor), mixed-use buildings (with retail or public uses on the ground floor with senior housing above), and community-serving space (including a separate two-story community center). The height of the new buildings would range from 40 to 60 feet above ground level, with 18 buildings at 40 feet or less in height, 15 buildings at 50 feet in height, and one building at 60 feet in height. The project would also realign Sunnydale, Brookdale and Blythedale Avenues and Santos Street and add new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street.

Although the project would alter the views available at the pedestrian level within the project site and from nearby streets, as well as view from some portions of Gleneagles International Golf Course and Herz Playground adjacent to the project site (as described below), mid-range views of the project site would not be substantially altered because the project site slopes down to the south and the east, making the buildings less visible from surrounding areas than in areas of more level terrain. Because John McLaren Park is at a higher elevation than the project site and mostly wooded, the proposed project would not be visible from most paths and trails within the park, as described below, and even when visible, would not obstruct views of the Bay from the park, given the modest heights of most buildings.

To support this analysis, a series of photomontages have been prepared that depict the proposed project from several viewpoints within and surrounding the project site. Figure 4.4-1 presents a map of viewpoints presented in this analysis, while **Figures 4.4-2** through **4.4-5** present a series of photographs of the existing conditions at the top of each page along with simulations of what the site would look like after the project is implemented at the bottom of each page.



Existing View



Proposed Project

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 4.4-2

Visual Simulation of the Proposed Project from Viewpoint A,
Intersection of Guadalupe Canyon Parkway and Carter Street



Existing View



Proposed Project

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 4.4-3

Visual Simulation of the Proposed Project
from Viewpoint B, Herz Playground



Existing View



Proposed Project

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 4.4-4

Visual Simulation of the Proposed Project from Viewpoint C,
Intersection of Hahn Street and Sunnydale Avenue



Existing View



Proposed Project

SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 4.4-5

Visual Simulation of the Proposed Project from Viewpoint D,
Brookdale Avenue

As depicted in Figure 4.4-2, the project site is visible in a long-range view from Viewpoint A, at the intersection of Guadalupe Canyon Parkway and Carter Street, approximately three quarters of a mile south of the project site. The existing view from this vantage point (discussed further in Section 3.4) generally shows a low-rise development consisting of rows of long, rectangular buildings set within a wider context of residential neighborhoods, a large park and the nearby Cow Palace. With project implementation, the project site would appear bulkier and more built up from this vantage point. The view of the existing pattern of buildings separated by open space would no longer be available. Instead, the view would include building clusters of various heights and sizes, built at a higher density compared to the existing development, and surrounded by landscaping. Despite appearing slightly taller and larger than buildings on the immediately surrounding lots (for example, housing on blocks south of Velasco Street or east of Hahn Street), the proposed buildings would not be of sufficient height or bulk to materially block any of the existing features currently visible from this viewpoint, which include hillsides, the surrounding development, and the nearby Cow Palace. The proposed buildings would generally blend in with the surrounding residential development and would not obscure or dominate this view.

Figure 4.4-3 illustrates the existing and proposed views of the project site from Viewpoint B, Herz Playground, just north of the project site. Similar to the existing view from this vantage point (discussed in Section 3.4 on p. 3.4-4), the project site would continue to be largely obscured by intervening vegetation that lines the southern edge of the playground. Although the upper stories and rooftops of some of the proposed buildings would be visible between the trees, the proposed project would not adversely affect this view. The proposed buildings would appear taller than the existing buildings and some may partially block views of the hillsides in the distance such as the larger building shown on the right. However, given the limited views currently available from this vantage point and the fact that the project would replace the existing two-story residential buildings with residential buildings that are slightly taller, changes to this view would be considered less than significant.

Figure 4.4-4 depicts the proposed project from Viewpoint C, the intersection of Hahn Street and Sunnydale Avenue, immediately east of the project site. This short-range view, from one of the primary entrances into the project site, shows the proposed four-story residential buildings on the south side of Sunnydale Avenue and the southern façade of the proposed two-story community center on the north side of Sunnydale Avenue. The residential building would contain recessed entrances along the ground story with heavy articulation above. A flat awning projection would be featured at the corner of the building. The view of the community center, in the right side of the photograph, would include the proposed gateway plaza fronting Sunnydale Avenue that would serve as an entrance point in the neighborhood and provide a gathering space for residents and users of the community center. Additional residential buildings proposed by the project would be visible in the background and would also be of modest scale. The visual simulation shows street trees lining both sidewalks of Sunnydale Avenue, with realignment of Sunnydale Avenue seen in the distance. This view, while more built up than the existing conditions, would continue to convey the look of a typical low- to mid-rise urban neighborhood in San Francisco. Noticeably taller, the new buildings would partially block views of the sky but would not adversely affect public views available from this viewpoint.

Figure 4.4-5 illustrates the proposed view from Viewpoint D, which is within the project site, along the portion of Brookdale Avenue that would be realigned. With the proposed project, the realignment of the street grid and the reorientation of the buildings would produce a continuous street wall along both sides of Brookdale. The buildings would be taller than what currently exists on the site and may block some views of the surrounding areas. However, most of the views through Visitacion Valley, including views of the Bay, would continue to be available. The project site would also benefit from the sidewalk improvements and the installation of more consistent landscaping, including street trees. Similar to views discussed above, views from this vantage point would present a typical urban street scene of a residential neighborhood and would not be considered adverse compared to existing conditions.

In conclusion, although the proposed buildings would be taller and more bulky than those currently on the project site and exhibit an overall more dense development pattern, the project would not obstruct scenic long-range views and most views of the nearby parks, hillsides, and the Bay would continue to be available.

Thus, the impact would be *less than significant* under NEPA because the proposed project would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources.

Mitigation: None required.

Impact AE-2: Effects on Visual Character

NEPA: The proposed project would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area. (Less than Significant)

CEQA: This topic is not applicable under CEQA for this project.

Construction

The proposed project would be implemented in three major construction phases over several years, during which certain portions of the site would be dominated by construction-related equipment and vehicles. The machinery, equipment, and partially-completed buildings present during construction would be somewhat out of character with the existing one- and two-story residential complex. However, as discussed above, construction activities would be limited to one project phase at any given time.

Regarding lighting, portable lighting would be required during the evening hours to illuminate construction areas, particularly during the winter months. While this may constitute a nuisance for some of the site's residents and residents of the surrounding areas, it would be temporary and focused on the construction areas, resulting in little to no spillover into the surrounding residences. Moreover, any lighting used during construction would be typical of what is employed during construction elsewhere in the city.

Given that the project site does not currently exhibit unique or distinctive visual characteristics and the temporary nature of construction, the proposed project would not be expected to substantially degrade the visual character or quality of the site during its construction phase.

Operation

As discussed above under Impact AE-1, the proposed project would alter views of the project site by replacing the 97 two-story (approximately 20-foot-tall) buildings with 34 new two- to four-story structures containing a mix of residential building types. The height of the buildings would range between 40 and 60 feet above ground level, with 18 buildings at 40 feet or less in height and 15 buildings at 50 feet in height, and one building at 60 feet in height. The project would also realign Sunnydale, Brookdale and Blythedale Avenues and Santos Street and add new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street. The new street pattern would create a block grid and development density that more closely resembles that of other neighborhoods throughout the rest of the Visitacion Valley neighborhood and elsewhere in the city, consisting of smaller blocks with buildings oriented toward the street.

Although the proposed project would alter the visual character of the site compared to existing conditions, such change would not be considered adverse and could be considered beneficial by some observers. The exterior building features, including cladding materials, fenestration patterns, paint palette and other architectural elements have not yet been determined but would be used to emphasize the visual interconnectedness of neighborhood while allowing some differentiation between building types. The proposed system of green streets, parks, internal courtyards and other features, such as pavilions and gathering spaces, would also enhance the overall look and feel of the project site while promoting its pedestrian scale. These changes, while noticeable, would not be expected to diminish the visual quality or character of the project site.

The proposed project would also alter the visual character of the project site by increasing the amount of pedestrian and vehicular activity on the site and in the surrounding areas. However, this would revitalize the site, which is one of the project's objectives.

In general, the proposed project would noticeably alter the visual character of the project site compared to existing conditions; however, this impact would not be considered adverse. The site would maintain its primary defining visual characteristic, which is that of a multi-family residential complex. It would also preserve its unique topography, which slopes down to the south and the east. With implementation of the proposed project, the new street grid would increase visual connection and cohesion with the surrounding neighborhood and encourage the pedestrian experience by providing visually interesting elements on the street level (such as landscaping and improved sidewalks). While changes to the street grid, building configurations, landscaping, and other related elements would vastly alter its appearance, the visual quality of the site would generally be considered an improvement compared to existing conditions.

Regarding lighting, the project would replace the existing street lamps throughout the project site and may introduce additional street lighting for safety reasons. New night lighting would also be introduced by intensifying the development on the site, which would result in a greater amount

of residential lighting that would be visible through windows. However, such lighting would occur in an established neighborhood where night lighting already occurs. Exterior lighting at building entryways would be positioned to minimize glare. Moreover, the changes in lighting would not be in excess of that commonly found and accepted in urban areas, and environmental effects of light and glare due to the project would not be significant. The project would comply with Planning Commission Resolution 9212, which prohibits the use of mirrored or reflective glass. Thus, the project would not produce glare affecting other properties.

For the reasons stated above, the proposed project would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area, and this NEPA impact would be *less than significant*.

Mitigation: None required.

Proposed Project Variant

The proposed project variant would result in the same visual quality impacts as those described for the project above. Construction activities would proceed in the same way and would last the same duration as for the proposed project. Moreover, physical elements of the project, including the street grid, building sizes and masses, landscaping, etc., would be implemented in the same way as for the proposed project. Impacts under NEPA would be the same as those under the proposed project.

Alternative A: Reduced Development / Density Alternative

Impact A-AE-1: Effects on Views

NEPA: The Reduced Development / Density Alternative would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources. (Less than Significant)

CEQA: The topic is not applicable under CEQA for this project.

The Reduced Development / Density Alternative would be located within the same boundary as the proposed project, and would include the same street layout and a similar built envelope. The alternative's intensity of residential uses would be somewhat less than under the proposed project, but the mix of residential, community-serving, retail and open spaces uses would otherwise be substantially similar to those proposed under the project. Similar to the proposed project, buildings under the Reduced Development / Density Alternative would range from 40 to 60 feet above ground level and would consist of a mix of townhomes/rowhomes, stacked flats, podium buildings, corridor buildings and mixed-use buildings. Moreover, the Reduced Development / Density Alternative would include the same amount of community service, recreational, and education facilities, to be sited in the same locations as under the proposed project. It would also include the same parks as well as a community garden, a farmer's market

pavilion and secure outdoor courtyards within the residential buildings and would realign the street grid in the same way. Similar to the proposed project the Reduced Development / Density Alternative would be constructed in three phases, presumed to be of similar duration to those of the proposed project.

Based on the foregoing, it is expected that views of the Reduced Development / Density Alternative would be similar to the proposed project, both during the construction and operational phase, and that this alternative would not have a substantial adverse effect on a scenic vista or reduce public opportunities to view scenic resources.

Thus, the impact would be *less than significant* under NEPA because the alternative would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources.

Impact A-AE-2: Effects on Visual Character

NEPA: The Reduced Development / Density Alternative would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area. (Less than Significant)

CEQA: This topic is not applicable under CEQA for this project.

Construction

The Reduced Development/Density Alternative would be similar in visual character to the proposed project. During the construction phase, select portions of the site would be visually defined by construction activities, including exposed earth, machinery, equipment, and partially completed buildings. However, this would be temporary and would not diminish the visual quality of the site such that it would be considered substantially adverse.

Operation

During the operational phase, this alternative would convey a visual character that would be similar to that of the proposed project. Although this alternative would noticeably alter the visual character of the project site compared to existing conditions, this impact would not be considered adverse. The site would maintain its primary defining visual characteristic, which is that of a multi-family residential complex. The unique sloping topography of the site would also be preserved. While changes to the street grid, building configurations, landscaping, and other related elements would vastly alter its appearance, the visual quality of the site would likely improve. While changes in visual character would be expected, such changes would not be considered adverse.

For the reasons stated above, the alternative would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area, and this NEPA impact would be *less than significant*.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-AE-1: Effects on Views

NEPA: The One-for-One Replacement Alternative would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources. (Less than Significant)

CEQA: The topic is not applicable under CEQA for this project.

Construction

The One-for-One Replacement Alternative would involve demolition and reconstruction of all of the buildings on the project site, including all 785 existing public housing units. The buildings would be replaced in approximately their same locations and would have the substantially similar floor plans to those that currently exist. The 785 units would remain affordable housing. There would be minimal change in the project site's street layout or existing connections to the surrounding community. Construction activities could temporarily close off portions of the project site. These closures would temporarily block some views of and through the project site, although other public views would be available. The construction of the One-for-One Replacement Alternative would be similar in most respects to that of the proposed project and would not be expected to have a substantial adverse effect on a scenic vista or reduce public opportunities to view scenic resources.

Operation

The One-for-One Replacement Alternative would have a similar physical layout and building configurations as under existing conditions. No taller buildings would be introduced by the alternative and no street realignment would occur. Therefore, existing views of and through the site, including views of nearby open spaces and the Bay, would continue to be available, as under existing conditions.

Thus, the impact would be *less than significant* under NEPA because the alternative would not substantially block or disrupt views of scenic resources or reduce public opportunities to view scenic resources.

Mitigation: None required.

Impact B-AE-2: Effects on Visual Character

NEPA: The One-for-One Replacement Alternative would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area. (Less than Significant)

CEQA: This topic is not applicable under CEQA for this project.

Construction

The One-for-One Replacement Alternative would be similar in visual character to the existing site. During the construction phase, select portions of the site would be visually defined by construction activities, similar to the proposed project and Alternative A. However, construction would be of a much shorter duration. It would be temporary and would not substantially diminish the visual quality of the project site.

Operation

During the operational phase, this alternative would convey a visual character that would be similar to that of the existing project site, although it is likely to be somewhat improved with construction of more modern structures and improvements to the existing landscaping, walkways, open space, etc. However, the street grid, buildings, and other elements would approximate that of the existing project site and would not degrade the existing visual character or quality of the site or its surroundings.

The alternative would not introduce elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area, and the impact under NEPA would be *less than significant*.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, existing conditions at the project site would remain unchanged. The 785 public housing units would not be replaced, and no other improvements would be implemented. Despite regular maintenance, the existing housing and infrastructure on the project site could continue to deteriorate, as has been the case under existing conditions (see Chapter 1, Purpose and Need), and the visual character currently experienced on the site would be maintained. Therefore, the No Action Alternatives would result in *no impact* under NEPA with respect to aesthetics and visual quality.

4.4.3 Cumulative Impacts

Impact CC-AE: Cumulative Effects on Visual Quality

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative visual quality / aesthetics impacts. (No Impact)

CEQA: This topic is not applicable under CEQA for this project.

Proposed Project, Variant, and Alternative A

The cumulative effects analysis includes the surrounding neighborhood where visual resources would be affected by the project or cumulative development. As stated in Chapter 1, Purpose and Need, the 700-acre Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project is located about 2 miles east of the project site. The Visitacion Valley Redevelopment Project Area is approximately 1 mile east of the project site. In addition, the Executive Park Sub Area Plan Special Use District (SUD) is planned for the approximately 70-acre area between Candlestick Point and Highway 101.

All three of these plans envision a mix of residential and commercial uses. In combination with the proposed project or its variant/alternatives, the anticipated cumulative development would intensify the southeast area of the city by building up large sections of land and possibly introducing new or modified elements to those sites, such as new community facilities, open space, sidewalks, and landscaping.

The new buildings on the cumulative project sites are expected to be of similar height and bulk as the proposed projects and may block some public views of and through those sites and could also limit views of the Bay or of nearby open spaces. However, views of these elements would continue to be available from other vantage points throughout the southeastern area of the city. The project site is at a sufficient distance from these other sites that it is unlikely that visual impacts from all of these projects would combine in a way that would result in significant impacts to scenic vistas. Moreover, the proposed project would result in no impact with respect to scenic views and vistas. Therefore, the proposed project would not contribute to this effect.

With respect to cumulative impacts related to visual character, as discussed above, the expected changes on the project site would not lead to changes of visual character that would be considered adverse. The project would maintain and improve upon the defining features of the project site, which are its residential uses and its sloping topography. Other cumulative projects would likewise develop those sites in a way that does not adversely affect, and arguably improves, the overall visual conditions of those sites and makes them more attractive to residents

and visitors.^{4,5,6} Intervening topography, such as Bayview Hill and the ridge that extends southeast from Mansell Street and McLaren Park, precludes cumulative views of all of the cumulative projects from any single viewpoint. The proposed project would not make a substantial contribution to any potential cumulative impacts with respect to introduction of elements that are out of character or scale with the existing physical environment or that detract from the aesthetic appeal of the surrounding area.

Based on the above, there would be ***no impact*** under NEPA because the proposed project, variant, or Alternative A, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative visual quality / aesthetics impacts.

Alternative B

Alternative B would result in a built form and character substantially similar to existing conditions. Therefore, there would be ***no impact*** under NEPA because the alternative would not contribute to cumulative effects on visual quality.

⁴ San Francisco Planning Department, *Visitacion Valley Redevelopment Program Draft Environmental Impact Report*, Case No. 2006.1308, June 3, 2008. This document is available online at <http://www.sfredevelopment.org/index.aspx?page=137>.

⁵ San Francisco Planning Department, *Candlestick Point – Hunters Point Shipyard Phase II Draft Environmental Impact Report*, File No. 2007.0946E, November 12, 2009.

⁶ San Francisco Planning Department, *Executive Park Amended Subarea Plan and the Yerby Company and Universal Paragon Corporation Development Projects*, Case No. 2006.0422E, October 13, 2010.

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4.5 Socioeconomics / Population and Housing

4.5.1 Regulatory Framework

Federal

Uniform Relocation Act

The Uniform Relocation Act (URA), passed by Congress in 1970, establishes minimum standards for federally-funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms.¹

Section 205 of the URA requires, “Programs or projects undertaken by a federal agency or with federal financial assistance shall be planned in a manner that (1) recognizes, at an early stage in the planning of such programs or projects and before the commencement of any actions which will cause displacements, the problems associated with the displacement of individuals, families, businesses, and farm operations, and (2) provides for the resolution of such problems in order to minimize adverse impacts on displaced persons and to expedite program or project advancement and completion.”^{2,3}

Housing and Community Development Act

Section 104(d) of the Housing and Community Development (HCD) Act, passed in 1974, provides minimum requirements for certain HUD-funded programs or projects. Specifically, funding recipients must certify that they have in effect and are following a Residential Anti-displacement and Relocation Assistance Plan (RARAP), provision of relocation assistance to lower-income tenants displaced as a direct result of demolition of any dwelling unit, and replacement on a one-for-one basis of all occupied and vacant occupiable lower-income dwelling units that are demolished.⁴

State

State law also requires development of a Housing Element for each city and county and a Regional Housing Needs Plan, as discussed below.

¹ *United States Code. Uniform Relocation Act.* 49 CFR Part 24. (a) (11).

² *United States Code.* Title 42--The Public Health And Welfare, Chapter 61 -- Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs, available online: <http://www.law.cornell.edu/uscode/text>, accessed March 2012.

³ *United States Code.* Section 4601, Uniform Relocation Act. Section 101(6)(B).

⁴ U.S. Department of Housing and Urban Development, Overview of Section 104(d), web page: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/training/web/relocation/section104d, accessed August 2014.

Regional and Local

San Francisco Bay Area Regional Housing Needs Plan

The California Department of Housing and Community Development (HCD) is responsible for allocating each region's share of the statewide housing need to Council of Governments (COGs) based on Department of Finance population projections and regional population forecasts used in preparing regional transportation plans. The Association of Bay Area Governments (ABAG), as the San Francisco Bay Area region's COG, is responsible for developing a Regional Housing Needs Plan that describes the region's allocation method and the actual allocation of housing need to the cities and counties within the region. In July 2013, the Association of Bay Area Governments (ABAG) adopted its *Regional Housing Needs Plan for the San Francisco Bay Area, 2014–2022*, which identified the San Francisco Bay Area's housing needs allocation of 187,990 dwelling units for the 2014–2022 planning period. According to this document, San Francisco should provide approximately 28,869 additional dwelling units (6,234 very low-income, 4,639 low income, 5,460 moderate income and 12,536 above moderate income units) for the 2014–2022 planning period to help accommodate regional needs.⁵

San Francisco Housing Element

The *San Francisco General Plan* provides general policies and objectives to guide land use decisions and development throughout the city, as described in Chapter 4, Plans and Policies.

Residential Inclusionary Affordable Housing Program

In 2006, the City adopted amendments to the Residential Inclusionary Affordable Housing Program contained in *Planning Code* Section 415 (formerly Section 315). The amended *Planning Code* Section 415 requires that a project involving ten or more new dwelling units must (a) provide on-site Below Market Rate units equal to 12 percent of the total number of units, (b) provide off-site Below Market Rate units equal to 20 percent of the total number of units, or (c) pay a fee equivalent to 20 percent of the total number of units. All Sunnydale-Velasco HOPE-SF Master Plan Project development alternatives provide on-site below market rate units that are greater than 12 percent of the total number of units.

4.5.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

The following applicable thresholds were used to determine whether implementing the proposed project and its alternatives would result in an adverse effect related to socioeconomic characteristics.

- Result in displacement of existing residents or businesses;

⁵ ABAG, 2013. 2014-2022 Regional Housing Need Plan for the San Francisco Bay Area, 2011-2022. Available on the internet at: http://www.abag.ca.gov/planning/housingneeds/pdfs/2014-22_RHNA_Plan.pdf. Accessed February 27, 2014.

- Result in physical barriers or reduced access that would isolate a particular neighborhood or population group;
- Induce a substantial amount of unplanned growth; or
- Cause a substantial decrease in local or regional employment.

Significance Criteria under CEQA

Implementation of the proposed project and its alternatives would have a significant effect on population and housing if it would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Approach to Analysis

Both CEQA Guidelines ⁶ and 40 CFR (for NEPA)⁷ recognize that economic or social changes by themselves are not considered a significant effect unless they are linked to a change in the physical environment. To this extent the analysis examines changes to the physical environment, including effects to the location of people and housing.

Population growth is considered in the context of local and regional plans and population, housing, and employment projections. Generally, a project that induces population growth is not viewed as having a significant impact on the environment unless this growth is unplanned and results in significant physical impacts on the environment. Project-related growth and the increase in population would primarily result in physical changes in transportation, noise, air emissions, increased demand for public services, increased demand for utility capacity, and increased demand for recreational facilities. These physical impacts are evaluated under other environmental topics in this chapter such as Sections 4.8, Transportation and Circulation; 4.9, Noise; 4.10, Air Quality; 4.14, Utilities and Services Systems; and 4.15, Public Services.

⁶ Section 15064(e) "Economic and social changes resulting from a project shall not be treated as significant effects on the environment. ... Where a physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project."

⁷ CEQ Section 1508.14 "'Human environment'" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" (Sec. 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment."

The impact analysis considers whether the proposed project or its alternatives would contribute to substantial residential population and employment growth. Direct population growth would result from the residents who would occupy the newly developed housing units and the people who would be employed by the proposed retail uses at the project site, as well as from temporary construction employment. Indirect or secondary growth from development/expansion of infrastructure would not occur as the project site is located in an urban and built up area with existing infrastructure; thus, this issue will not be discussed further below. The analysis also considers whether substantial numbers of residents or housing units would be displaced.

The proposed project and its alternatives involve the redevelopment of housing and community-serving uses. The proposed project and alternatives would not result in the displacement of businesses or a substantial decrease in local or regional employment and thus this issue will not be discussed further in the document.

Proposed Project

Impact PH-1: Effects on Growth

NEPA: The proposed project would not induce a substantial amount of unplanned growth. (No Impact)

CEQA: The proposed project would not induce substantial population growth, either directly or indirectly. (Less than Significant)

Construction

Construction would result in temporary, construction job growth at the project site as a result of the proposed project. It is anticipated that construction employees not already living in San Francisco would commute from elsewhere in the Bay Area rather than relocating to the Visitacion Valley neighborhood for a temporary construction assignment. Thus, construction is not anticipated to generate a substantial, unplanned population increase.

Operation

The proposed project would replace 785 existing affordable housing units and develop an additional 915 affordable housing and market rate units. Of the 915 additional units, 24 percent (approximately 221 units, including 150 senior housing units) would be affordable housing while 76 percent (approximately 694 units) would be market-rate housing. Based on the ABAG Regional Housing Need Allocation, it is anticipated that San Francisco will need to provide approximately 28,869 additional dwelling units (6,234 very low-income, 4,639 low income, 5,460 moderate income and 12,536 above moderate income units) for the 2014–2022 planning period to accommodate regional needs.⁸ The proposed project would provide 221 units, or 2.0 percent, of the 10,873 very low- and low-income units needed and 694, or 5.5 percent, of the 12,536 market-rate units needed.

⁸ ABAG, 2013, *op cit*.

The project site currently has 1,700 residents, or 2.17 residents per unit.⁹ Assuming a straight-line increase, the additional 915 units would increase the site population by 1,986 persons. However, the increase would likely be far less, given market-rate units generally attract tenants and owners with fewer children, as well as that senior units would not have more than 2 people per unit (and in most cases, 1 person per unit).¹⁰

The project sponsor proposes to apply to the San Francisco Planning Commission and Board of Supervisors for a rezoning that would create a Special Use District (SUD) that would allow for certain non-residential uses and allow for the distribution of the allowable density unevenly across the site (i.e., certain blocks could develop at higher densities than would be otherwise allowed, as long as the density of the entire site is not exceeded). The project site includes approximately 2,127,187 square feet (48.8 acres) not including public streets.

The project site is zoned RM-1 or Residential, Mixed (Houses and Apartments) District with an allowable density of 1 unit per 800 square feet.¹¹ Thus, approximately 2,659 total units would be allowable under the existing zoning, and the proposed project would include 1,700 units. As such, the proposed number of units is consistent with the planned, allowable development density for the overall project site.

The project would support about 46 retail employees.¹² Therefore, project-related employment growth would compose an insubstantial portion or projected citywide employment growth of 138,950 new wage and salary jobs by the year 2030,¹³ assuming that all employees in the project would be new to San Francisco. This potential increase in employment would be minimal in the context of the total employment in greater San Francisco. Assuming the employees are new to San Francisco, the proposed project would create a small demand for housing in San Francisco. Since the proposed project would add 915 new dwelling units, it would satisfy the need for new housing in the vicinity of the jobs that would be created.

In summary, the proposed project provides a portion of the anticipated 2014–2022 housing demands for both affordable and market-rate housing; the number of proposed units is consistent with the planned, allowable development density for the whole project site; the proposed project provides a small portion of the anticipated employment growth; and the proposed project would provide more than enough housing to accommodate the increase in on-site employment.

⁹ LFA Group, 2011. Baseline Evaluation Data for Sunnydale. Fiscal year July 1, 2010 to June 30, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ Lapkoff & Gobalet Demographic Research, *Demographic Analysis and Enrollment Forecasts for the San Francisco Unified School District*, March 18, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹¹ San Francisco Planning Department, 2013. San Francisco Zoning Map dated January 2013. Available online at: <http://www.sf-planning.org/modules/showdocument.aspx?documentid=9016>. Accessed March 26, 2013.

¹² Employment calculations in this section are based on the City of San Francisco *Transportation Impact Analysis Guidelines*, which estimate an average density of 350 square feet per employee assigned to restaurant/retail space, and 276 square feet per employee assigned to office uses.

¹³ See Table 3.5-1. 707,670 projected wage and salary jobs in 2030 minus the estimated 568,720 wage and salary jobs in 2010.

Conclusion

The proposed project would result in ***no impact*** under NEPA because it would not induce a substantial amount of unplanned growth.

The proposed project would result in a ***less-than-significant*** impact under CEQA because it would not induce substantial population growth, either directly or indirectly.

Mitigation: None required.

Impact PH-2: Displacement Effects

NEPA: The proposed project would result in displacement of existing residents. (Less than Significant)

CEQA: The proposed project would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere. (Less than Significant)

As stated in the Project Description, the project would be constructed in three phases. Demolition of the existing buildings on the site would temporarily relocate approximately 1,700 existing residents and 785 units at the project site. The proposed project would be constructed in phases, and existing residents would be moved to vacant units in other parts of the project site or to units in completed phases. If comparable space were unavailable on the site, residents in good standing would be given vouchers for housing elsewhere in the City for the duration of that particular phase of construction.

Existing households would be provided a relocation coordinator who would assist in evaluating the moving options, special needs of the households, and assistance in moving. The cost of the temporary housing for the existing residents would not increase as a result of the temporary relocation. As of January 1, 2014, there were estimated to be 31,275 vacant units in San Francisco, including both market-rate and affordable units.¹⁴

NEPA is concerned with the significance of the physical environmental effects associated with this displacement, as well as with the social effect of such displacement—specifically, the potential lessening or loss of community cohesion and public well-being. Community cohesion refers to the maintenance of connections in the community. Public well-being refers access to amenities that allow for the maintenance of a reasonable quality of life, including walkability, aesthetic quality, open space, and social connections.

Generally, a displaced person under the URA is an individual, family, partnership, association, corporation, or organization, which moves from their home, business, or farm, or moves their

¹⁴ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2014, with 2010 Benchmark*. Sacramento, California, May 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

personal property, as a direct result of acquisition, demolition or rehabilitation for a federally funded project for a duration greater than 12 months. It is estimated that each phase of construction would last between 3 to 5 years for a total of 9 to 15 years in duration for the entire project. Therefore, residents temporarily relocated off-site using vouchers provided by the Housing Authority would be displaced for a duration greater than 1 year, and they would be defined as “displaced” under the URA.

Residents would be inconvenienced by the relocation and the time and effort required to pack, move, and re-establish living routines—including locating and accessing community and commercial services—both when moving from their original units and when returning to the project site. It is possible that students could be required to change schools, depending on where in the City families relocate.

Although the entire site population would not be displaced simultaneously, the relocation of residents could disrupt existing social networks because displaced residents would not move en-masse, but instead move to individual available units in various locations. This disruption of existing social networks could result in a lessening or loss of community cohesion and a lessening of public well-being.

As stated in the Project Description, the project sponsor will prepare a Relocation Assistance Plan (RAP), or Equivalent Plan. The RAP will describe criteria for financial assistance for replacement housing, and reimbursement criteria for moving costs and/or different housing costs (including rents). Residents unable to relocate on site would be given housing vouchers by the Housing Authority for relocation elsewhere during the construction period. The new dwellings would be populated as each phase is completed. Existing residents in good standing who had moved off-site during construction would be given the first opportunity to return.

Every resident residing in a public housing dwelling unit and in good standing (lease compliant) at the start of their relocation phase and during their relocation phase would have the right to return to the project site. Returning residents would be provided a preference for occupancy prior to other eligible households. This preference would be retained even if the resident has received permanent relocation benefits.

The impact would be *less than significant* under NEPA because the proposed project would result in displacement of existing residents, but would reduce impacts associated with relocation through preparation and implementation of a RAP.

The impact would be *less than significant* under CEQA because the proposed project would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere.

Mitigation: None required.

Impact PH-3: Physical Barrier Effects

NEPA: The proposed project would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group. (Significant and Beneficial)

CEQA: This topic is not covered under CEQA. Please see Section 4.3, Land Use, for an analysis of land use effects related to physical division of an established community.

Existing residents currently experience isolation and physical separation from surrounding neighborhoods due to the limited connectivity provided by the street network. Although there are some access points into the housing complex, the borders surrounding the complex are impermeable and dead-end streets abut the neighborhood. The project site's limited and curvilinear roads reduce visual and physical accessibility in comparison to the street grid network of the larger Visitacion Valley neighborhood.

The project sponsor proposes realigning Sunnydale, Brookdale and Blythedale Avenues and Santos Street and adding new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street. This integration would foster easier access to surrounding services. The proposed project would reduce physical barriers and improve access for existing residents and the surrounding neighborhood by better integrating the project site into the surrounding street grid network.

The proposed project would result in a *significant and beneficial* impact under NEPA because it would reduce physical barriers and improve access that would reduce isolation of a particular neighborhood or population group.

Mitigation: None required.

Impact PH-4: Employment Effects

NEPA: The proposed project would not cause a decrease in local or regional employment. (No Impact)

CEQA: This topic is not covered under CEQA.

As stated under **Impact PH-1**, the proposed project would result in construction job growth at the site for the duration of construction. During operations, the project would support about 46 net new retail employees. The retail component of the proposed project could attract customers that currently patronize existing stores in other locations. This relocated spending would not be expected to result in a change in employment at the other locations. Regional employment would not be affected.

There would be *no impact* under NEPA because the proposed project would not cause a decrease in local or regional employment.

Mitigation: None required.

Proposed Project Variant

The proposed project variant does not differ from the proposed project with respect to displacement and the development of replacement of housing for existing residents. Additionally, the total number of units constructed would be similar to that under the proposed project. Thus construction and operation of the proposed project variant would have similar impacts, under both CEQA and NEPA.

Alternative A: Reduced Development / Density Alternative

Impact A-PH-1: Effects on Growth

NEPA: The Reduced Development / Density Alternative would not induce a substantial amount of unplanned growth. (No Impact)

CEQA: The Reduced Development / Density Alternative would not induce substantial population growth, either directly or indirectly. (Less than Significant)

Construction would result in temporary, construction job growth at the project site as a result of the proposed project. It is anticipated that construction employees not already living in San Francisco would commute from elsewhere in the Bay Area rather than relocating to the Visitacion Valley neighborhood for a temporary construction assignment. Thus construction is not anticipated to generate a substantial, unplanned population increase.

Based on the ABAG Regional Housing Need Allocation, it is anticipated that San Francisco will need to provide approximately 28,869 additional dwelling units (6,234 very low-income, 4,639 low income, 5,460 moderate income and 12,536 above moderate income units) for the 2014–2022 planning period to accommodate regional needs.¹⁵ The alternative would provide 67 units, or 0.6 percent (six tenths of 1 percent), of the 10,873 very low- and low-income units needed and 520, or 4.1 percent, of the 12,536 market-rate units needed.

The project site currently has 1,700 residents, or 2.17 residents per unit.¹⁶ Assuming a straight-line increase, the additional 587 units would increase the site population by 1,274 persons. However, the increase would likely be far less, given market-rate units generally attract tenants and owners with fewer children, as well as that senior units would not have more than 2 people per unit (and in most cases, 1 person per unit).¹⁷

¹⁵ ABAG, 2013, *op cit*.

¹⁶ LFA Group, 2011. Baseline Evaluation Data for Sunnydale. Fiscal year July 1, 2010 to June 30, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁷ Lapkoff & Gobalet Demographic Research, *Demographic Analysis and Enrollment Forecasts for the San Francisco Unified School District*, March 18, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The number of proposed units would be consistent with the planned, allowable development density for the whole project site; the alternative would provide a small portion of the anticipated employment growth; and the alternative would provide more than enough housing to accommodate the increase in on-site employment. As such, operation of the project would not induce a substantial amount of unplanned growth.

The alternative would result in *no impact* under NEPA because it would not induce a substantial amount of unplanned growth.

The alternative would result in a *less-than-significant* impact under CEQA because it would not induce substantial population growth, either directly or indirectly.

Mitigation: None required.

Impact A-PH-2: Displacement Effects

NEPA: The Reduced Development / Density Alternative would result in displacement of existing residents. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere. (Less than Significant)

The alternative would be constructed in phases, and existing residents would be moved to vacant units in other parts of the project site or to units in completed phases. As explained in Chapter 2, a RAP would be prepared, pursuant to HUD regulations. If comparable space were unavailable on the site, residents in good standing would be given vouchers for housing elsewhere in the City for the duration of that particular phase of construction. Existing households would be provided a relocation coordinator who would assist in evaluating the moving options, special needs of the households, and assistance in moving. Temporarily displaced residents could find housing in these units or elsewhere in the Bay Area. The Reduced Development / Density Alternative would not require construction of replacement housing due to displacement of existing units.

It is estimated that each phase of construction would last between 3 to 5 years for a total of 9 to 15 years in duration for the entire Alternative. Therefore, the residents who are temporarily relocated off-site using vouchers provided by the Housing Authority would do so for a period greater than 1 year. As under the proposed project,

The impact would be *less than significant* under NEPA because the alternative would result in temporary displacement of existing residents, but would reduce impacts associated with relocation through preparation and implementation of a RAP.

The impact would be *less than significant* under CEQA because the alternative would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere.

Mitigation: None required.

Impact A-PH-3: Physical Barrier Effects

NEPA: The Reduced Development / Density Alternative would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group. (Significant and Beneficial)

CEQA: This topic is not covered under CEQA. Please see Section 4.3, Land Use, for an analysis of land use effects related to physical division of an established community.

Existing residents currently experience isolation and segregation from surrounding neighborhoods. Although there are some access points into the housing complex, the borders surrounding the complex are impermeable and dead-end streets abut the neighborhood. The project site's limited and curvilinear roads reduce visual and physical accessibility in comparison to the street grid network of the larger Visitacion Valley neighborhood.

The Reduced Development / Density Alternative would include the realignment of Sunnydale, Brookdale and Blythedale Avenues and Santos Street and adding new cross streets to create a street grid that would improve connectivity and access within the development and to Hahn Street. This integration would foster easier access to surrounding services. The alternative would reduce physical barriers and improve access for existing residents and the surrounding neighborhood by better integrating the project site into the surrounding street grid network.

The alternative would result in a *significant and beneficial* impact under NEPA because it would not reduce physical barriers and improve access that would reduce the isolation of a particular neighborhood or population group.

Mitigation: None required.

Impact A-PH-4: Employment Effects

NEPA: The Reduced Development / Density Alternative would not cause a decrease in local or regional employment. (No Impact)

CEQA: This topic is not covered under CEQA.

The alternative would result in construction job growth at the site for the duration of construction. During operations, the alternative would support new retail employees. The retail component of the alternative could attract customers that currently patronize existing stores in other locations. This relocated spending would not be expected to result in a change in employment at the other locations. Regional employment would not be affected.

There would be *no impact* under NEPA because the alternative would not cause a decrease in local or regional employment.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-PH-1: Effects on Growth

NEPA: The One-for-One Replacement Alternative would not induce a substantial amount of unplanned growth. (No Impact)

CEQA: The One-for-One Replacement Alternative would not induce substantial population growth, either directly or indirectly. (Less than Significant)

Construction would result in temporary, construction job growth at the project site as a result of the proposed project. It is anticipated that construction employees not already living in San Francisco would commute from elsewhere in the Bay Area rather than relocating to the Visitacion Valley neighborhood for a temporary construction assignment. Thus construction is not anticipated to generate a substantial, unplanned population.

The One-for-One Replacement Alternative would replace 785 existing affordable housing units, and it would not increase residential population or employment at the project site. As such, operation of the One-for-One Replacement Alternative would not induce a substantial amount of unplanned growth.

The alternative would result in *no impact* under NEPA because it would not induce a substantial amount of unplanned growth.

The alternative would result in a *less-than-significant* impact under CEQA because it would not induce substantial population growth, either directly or indirectly.

Mitigation: None required.

Impact B-PH-2: Displacement Effects

NEPA: The One-for-One Replacement Alternative would result in displacement of existing residents. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere. (Less than Significant)

Construction of the One-for-One Replacement Alternative would require temporary relocation of approximately 1,700 existing residents and 785 units at the project site. Existing residents would be moved to vacant units in other parts of the project site or to units in completed phases. As explained in Chapter 2, a RAP would be prepared as part of the project. If comparable space were

unavailable on the site, residents in good standing would be given vouchers for housing elsewhere in the City for the duration of that particular phase of construction. Existing households would be provided a relocation coordinator who would assist in evaluating the moving options, special needs of the households, and assistance in moving. The cost of the temporary housing for the existing residents would not increase as a result of the temporary relocation. As of January 1, 2014, there were estimated to be 31,275 vacant units in San Francisco, including both market-rate and affordable units.¹⁸

The impact would be *less than significant* under NEPA because the alternative would result in temporary displacement of existing residents, but would reduce impacts associated with relocation through preparation and implementation of a RAP.

The impact would be *less than significant* under CEQA because the alternative would temporarily displace existing housing units and residents, but this displacement would not necessitate the construction of replacement housing elsewhere.

Mitigation: None required.

Impact B-PH-3: Physical Barrier Effects

NEPA: The One-for-One Replacement Alternative would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group. (No Impact)

CEQA: This topic is not covered under CEQA. Please see Section 4.3, Land Use, for an analysis of land use effects related to physical division of an established community.

The alternative would result in replacement of the existing buildings on site. It would not result in new physical barriers or reduced access that would isolate a particular neighborhood or population group beyond whatever isolation is present under existing conditions.

The alternative would result in *no impact* under NEPA because it would not result in physical barriers or reduced access that would isolate a particular neighborhood or population group.

Mitigation: None required.

¹⁸ State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2014, with 2010 Benchmark*. Sacramento, California, May 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Impact B-PH-4: Employment Effects

NEPA: The One-for-One Replacement Alternative would not cause a decrease in local or regional employment. (No Impact)

CEQA: This topic is not covered under CEQA.

The One-for-One Replacement Alternative would result in construction job growth at the site for the duration of construction. Operational employment would not be affected.

There would be *no impact* under NEPA because the alternative would not cause a decrease in local or regional employment.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, no development would occur, and the existing housing units and community uses would remain. The No Action Alternative would not displace existing residents or businesses. Although the existing configuration creates isolation and segregation from the surrounding neighborhood, this alternative would not alter the existing configuration and access points. As there would be no new development this alternative would not result in unplanned growth. Thus, this alternative would have *no impact* for socioeconomic, population and housing issues under both NEPA and CEQA.

4.5.3 Cumulative Impacts

Impact CC-PH: Cumulative Impacts to Socioeconomics, Population, and Housing

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative socioeconomic impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative population and housing impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The geographic context for cumulative population and housing effects is generally the City and County of San Francisco because population, employment and housing projections are available at the City/County level. Known nearby cumulative developments, cumulative developments

that could result in relocation or displacement, as well as citywide growth projections known to 2040, are considered.

The proposed project would be undertaken in an area in which large projects have recently been approved or are under consideration. In 2010, the City approved the Candlestick Point-Hunters Point Shipyard project, which will develop more than 10,000 housing units, along with more than 3.5 million square feet of office, technology, and retail space, a hotel and a marina. The Visitacion Valley /Schlage Lock SUD includes 46 acres extending on both sides of Bayshore Boulevard roughly between Sunnydale Avenue and Blanken Avenue in the center of the Visitacion Valley neighborhood approximately 1 mile to the east of the project site. This redevelopment will comprise 1,700 low- and middle-income apartments and condominiums, as well as parks, a community building, and grocery store. Across the U.S. 101 freeway, the Board of Supervisors in July 2011 approved *General Plan* and zoning amendments for the Executive Park area that will permit approximately 1,600 new dwelling units plus neighborhood-serving retail space. South of the project site, in the City of Brisbane in San Mateo County, the proposed Baylands project is in the planning stages. This project envisions a mix of office, research and development, light industrial, retail, residential, hotel, and entertainment space, along with open space, on 684 acres.

Growth Effects. Regarding population growth, the aforementioned cumulatively considered projects are largely infill development of currently underutilized sites. These redevelopments would largely serve to accommodate existing demand for residential and retail space, rather than induce new growth nearby, since the sites described above are surrounded by largely built-out communities. Given that development must occur consistent with adopted plans and policies including the applicable *General Plan* and Zoning Ordinance, and the developments would provide a portion of needed housing and jobs by 2030, cumulative impacts to population growth would be *less than significant* under both CEQA and NEPA for the proposed project, variant, and alternatives.

Displacement Effects. Although the foregoing projects, if realized, would increase the development density of portions of southeastern San Francisco and northeastern San Mateo County, these projects almost entirely involve reuse of so-called “brownfield” sites; that is, former industrial sites that are no longer in industrial use and lack residential development. Further, all of these projects would be developed on previously developed land. Thus, these projects would not displace substantial numbers of existing residents or housing. As discussed above, the proposed project, variant, and alternatives would temporarily displace existing residents.

Nearby cumulative development projects would not include displacement of existing residents. However, cumulative development projects farther away (including the HOPE SF Potrero Terrace project), could result in temporary displacement similar to the proposed project. These projects would also include relocation assistance, pursuant to the Uniform Relocation Act and Housing and Community Development Act. Therefore, these projects would not combine to result in cumulative impacts with respect to displacement of existing residents and housing. New housing would not be required to be constructed that could result in significant environmental effects.

As indicated above, displacement that occurs longer than 1 year would be considered an adverse effect under NEPA, but the project, variant, or alternatives would include a RAP that would reduce impacts. The cumulative displacement impact would be *less than significant* under NEPA. The displacement impact would be *less than significant* under CEQA.

Physical Barrier Effects. Regarding isolation of particular neighborhoods or population groups, the Visitacion Valley /Schlage Lock SUD--as with the proposed project, variant, and Alternative A--would create additional connections that would better integrate into the existing street network and provide improved access for the neighborhood. Thus the proposed project, variant, and Alternative A would have a cumulatively *significant and beneficial* impact under NEPA, when considered with this nearby project. Projects outside of Visitacion Valley neighborhood would cumulatively affect access to and from the project site vicinity.

However, Alternative B, which would not create additional neighborhood connections, would not contribute to cumulative significant and beneficial effects. Under this alternative, there would be *no impact*.

Employment Effects. Finally, the proposed project, variant, and alternatives would not reduce local and regional employment. As such, they would not contribute to cumulative effects related to losses of employment when combined with other past, present and reasonably foreseeable future projects. There would be a *less than significant* impact to employment under NEPA.

Conclusion

The proposed project, variant, or alternatives, in combination with other past, present, and reasonably foreseeable future projects, would result in *less than significant* cumulative socioeconomics impacts under NEPA.

The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would result in *less than significant* cumulative population and housing impacts under CEQA.

4.6 Environmental Justice

4.6.1 Regulatory Framework

Federal

Executive Order 12898

Federal Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, requires all federal agencies to address potential impacts regarding environmental justice when considering actions.¹ The order states that neither minority nor low-income populations may be subject to a disproportionate level of adverse impacts as a result of a project or action. The order also requires that representatives from minority and low-income populations that could be impacted by the project be engaged and participate in the impacts assessment and public involvement process. Section 3-30(c) of the order states that “federal agencies shall provide environmental justice populations the opportunity to comment on the development and design of research strategies pursuant to this order.” Section 5-5(c) states that federal agencies should “work to ensure that public documents, notices, and hearings related relating to human health or the environment are concise, understandable, and readily accessible to the public. Existing residents of the Sunnydale and Velasco complexes were sent notice of the public scoping meeting and ability to comment on the proposed project as discussed in Section 3.6.

Civil Rights Act

The Civil Rights Act ensures that the potential for discrimination is identified and addressed without regard to race, color, national origin, sex, age, or disability and includes the following adverse effects:

- Destruction or disruptions of community cohesion (community separation);
- Destruction or disruptions to access of available public and private facilities and services;
- Adverse employment effects;
- Displacement of businesses, housing, and people;
- Tax and property value losses;
- Actions injurious to the public’s health (e.g., air, noise, and water pollution); and
- Actions harmful to the public’s well being (e.g., aesthetic impacts and loss of recreational property).

¹ *Federal Register*, Vol. 59, No. 32, February 11, 1994. Executive Order Section 1-101. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

4.6.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

This analysis considers criteria encompassing the factors taken into account under NEPA to determine the significance of an action in terms of the context and intensity of its effects. Given EO 12898 applies only to federal actions, the analysis in this section is presented for purposes of analysis under NEPA only, and this analysis is not applicable under CEQA. For environmental justice issues, the analysis considers whether the proposed project or alternatives would:

- Result in substantial environmental impacts that disproportionately affect low-income and/or minority populations.

Significance Criteria under CEQA

Environmental Justice is not analyzed under CEQA.

Approach to Analysis

According to EO 12898, an environmental justice impact analysis should identify whether a proposed *federal action* would result in disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. “Disproportionately high and adverse effect on minority and low-income populations” for this impact analysis means that an adverse effect is predominately borne by a minority or low-income population and that the effect will be suffered by the minority or low-income population is appreciably more severe or greater in magnitude than the adverse effect on the rest of the population. As discussed in Section 3.6, the project site and immediate vicinity contain minority and low-income populations. The impacts of the proposed project and alternatives are evaluated with respect to construction and operation phase impacts on these populations.

Each section of Chapter 4 includes impact analyses under other environmental topics. Under environmental justice analysis, the impacts identified as significant and unavoidable would be analyzed in this section to determine whether those impacts would disproportionately affect low-income and/or minority populations.

Construction impacts would be analyzed to determine whether significant and unavoidable impacts would affect the existing populations of the project site and vicinity, which comprise low-income and minority populations.

Operational impacts would be similarly analyzed. As indicated in the Project Description in Chapter 2, upon completion of the proposed project, the Sunnydale-Velasco project site would comprise a mix of income levels. It is also possible that the addition of new residents to the project site would result in a different percentage of minority population. Regardless, the project site is almost entirely within census tract 605.02. As shown in Section 3.6, the surrounding census tracts have a high percentage of minority- and low-income populations. Therefore, significant

and unavoidable operational impacts would be analyzed to determine whether they would disproportionately affect low-income and minority populations at the project site and within the surrounding vicinity.

Proposed Project

Impact EJ-1: Environmental Justice Effects

NEPA: The proposed project would not result in a substantial impact that disproportionately affects low-income and minority populations. (No Impact)

CEQA: This topic is not covered under CEQA.

The proposed project would not result in any significant-and-unavoidable project-level impacts. As such, there would be *no impact*.

Mitigation: None required.

Proposed Project Variant

The variant would result in similar construction and operational impacts as the proposed project. There would be *no impact*.

Alternative A: Reduced Development / Density Alternative

Impact A-EJ-1: Environmental Justice Effects

NEPA: The Reduced Development / Density Alternative would not result in a substantial impact that disproportionately affects low-income and minority populations. (No Impact)

CEQA: This topic is not covered under CEQA.

Alternative A would not result in any significant-and-unavoidable project-level impacts. Therefore, there would be *no impact*.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-EJ-1: Environmental Justice Effects

NEPA: The One-for-One Replacement Alternative would not result in a substantial impact that disproportionately affects low-income and minority populations. (No Impact)

CEQA: This topic is not covered under CEQA.

There would be no significant-and-unavoidable impacts under Alternative B. Therefore, there would be *no impact*.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, existing conditions at the project site would remain unchanged. The 785 public housing units would not be replaced, and no other improvements would be implemented. No displacement would occur. Therefore, there would be *no impact* related to environmental justice as a result of the proposed project.

4.6.3 Cumulative Impacts

The geographic context for cumulative environmental justice effects is the project site and immediate vicinity which contain low-income and minority populations.

Impact CC-EJ: Cumulative Environmental Justice Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in substantial environmental transportation impacts that disproportionately affect low-income and minority populations. (Less than Significant)

CEQA: This topic is not covered under CEQA.

Proposed Project, Variant, and Alternative A

As indicated in Section 4.8, the proposed project (as well as the variant and Alternative A), in combination with cumulative development, would result in significant and unavoidable impacts to vehicular Levels of Service (LOS) at several intersections.

The local populations, living the census tracts at and surrounding the project site, would traverse these intersections on a regularly and daily basis, on trips to and from their homes. However,

both Bayshore Boulevard and Geneva Avenue are designated as Major Arterials in the City's *General Plan* Transportation Element. As stated there, Major Arterials are "cross-town thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways; these are routes generally of citywide significance; of varying capacity depending on the travel demand for the specific direction and adjacent land uses." Therefore, non-local populations—which could constitute moderate-income, high-income, or majority white populations—also drive through these intersections to access other local attractions and destinations, such as McLaren Park, Cow Palace, Interstate 280, and U.S. Route 101.

Therefore, this project would not disproportionately affect minority or low-income populations.

The impact would be *less than significant* under NEPA because the proposed project (as well as the variant), in combination with other past, present, and reasonably foreseeable future projects, would not result in substantial environmental transportation impacts that disproportionately affect low-income and minority populations. The same *less than significant* impact determination would hold true for the Reduced Development and Density Alternative.

Alternative B

However, the One-for-One Replacement Alternative would result in no impact to cumulative LOS. Therefore, this alternative would result in *no impact* to environmental justice cumulative transportation effects.

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4.7 Cultural and Paleontological Resources

4.7.1 Regulatory Framework

Federal Regulations

National Historic Preservation Act

Historic properties are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (16 *United States Code* Section 470f), and its implementing regulations. Under the NHPA, a historic property is considered significant if it meets the National Register of Historic Places (NRHP) listing criteria at 36 CFR 60.4, as stated below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- a) That are associated with events that have made a significant contribution to the broad patterns of our history, or
- b) That are associated with the lives of persons significant in our past, or
- c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- d) That have yielded, or may be likely to yield, information important in prehistory or history.

Section 106 of the NHPA requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally-assisted undertaking, or issuing licenses or permits, must consider the effect of the proposed undertaking on historical properties. A historical property may include a prehistoric or historic district, site, building, structure, or objects included in, or eligible for inclusion in, the NRHP maintained by the U.S. Secretary of the Interior. Federal agencies must also allow the Advisory Council on Historic Preservation (ACHP) to comment on the proposed undertaking and its potential effects on historical properties.

The implementing regulations for Section 106 of the NHPA (36 CFR 800) require consultation with the State Historic Preservation Officer (SHPO), the ACHP, federally recognized Indian tribes and other Native Americans, and interested members of the public throughout the compliance process. The four principal steps are:

- Initiate the Section 106 process (36 CFR 800.3);
- Identify historical properties, i.e., resources eligible for inclusion in the NRHP (36 CFR 800.4);
- Assess the effects of the undertaking on historical properties within the Area of Potential Effect (36 CFR 800.5); and
- Resolve adverse effects (36 CFR 800.6).

Adverse effects on historical properties are often resolved through preparation of a memorandum of agreement or programmatic agreement developed in consultation between the federal agency, the SHPO, Indian tribes, and interested members of the public. The ACHP is also invited to participate. The agreement describes stipulations to mitigate adverse effects on historical properties listed in or eligible for the NRHP (36 CFR 60). The proposed project has undergone Section 106 consultation as part of the NEPA process under the direction of the federal agency with jurisdiction in the project area: the City of San Francisco's Mayor's Office of Housing and Community Development (MOHCD), as lead agency under NEPA, acting on behalf of the U.S. Department of Housing and Urban Development.

The discussion of cultural resources is guided by an existing Programmatic Agreement (PA) between the City and County of San Francisco, SHPO, and the ACHP pursuant to Section 106.¹ The PA establishes the City's Section 106 responsibilities for the administration of undertakings subject to regulation by 24 CFR Part 58 which may have an effect on historic properties. The City is required to comply with the stipulations set forth in the PA for all undertakings that (1) are assisted in whole or in part by revenues from U.S. Department of Housing and Urban Development (HUD) Programs subject to 24 CFR Part 58 and that (2) can result in changes in the character or use of any historic properties that are located in an undertaking's APE.

In accordance with 36 CFR 800.2(c), MOHCD sent letters of invitation to participate in the Section 106 review process to the appropriate Native American individuals and organizations listed on the Native American Heritage Commission contact list for the City and County of San Francisco.

Irenne Zwierlein from the Amah/Mutsun Tribal Band responded by email on May 3, 2013. Ms. Zwierlein noted that the proposed project is near areas where artifacts or burials have been previously uncovered. She recommended that construction personnel are trained in 1) the cultural sensitivity of the area; 2) the types of cultural materials that could be uncovered; and 3) what to do in the event of a discovery. Ms. Zwierlein also recommended that Native American and archeological monitoring be conducted in areas with high archeological sensitivity.

As described below under Impacts, MOHCD consulted with SHPO regarding archaeological resource effects. Consultation resulted in a Memorandum of Agreement (MOA) between the City and County of San Francisco and the SHPO that outline measures that shall be completed to mitigate the effects of the project on historic properties.² Documents related to the Section 106 consultation are included in **Appendix CP**.

¹ City and County of San Francisco, et. al., *Programmatic Agreement (PA) by and Among the City and County of San Francisco, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Historic Properties Affected by Use of Revenue from the Department of Housing and Urban Development Part 58 Programs*, January 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² *Memorandum of Agreement Between the City and County of San Francisco and the State Historic Preservation Office Regarding the Sunnydale-Velasco HOPE SF Redevelopment Project*, July 22, 2014.

Paleontological Resources Preservation Act

This act provides for the preservation, management, and protection of paleontological resources on Federal lands, and insure that these resources are available for current and future generations to enjoy as part of America's national heritage. However, given the project site is not on federal land, these protections do not apply to the proposed project.

State Regulations

The State of California implements the NHPA of 1966 through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The Office of Historic Preservation also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdictions.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (*California Public Resources Code* (PRC) Section 5024.1[a]). The criteria for CRHR eligibility are based on NRHP criteria (PRC Section 5024.1[b]; *California Code of Regulations* [CCR], Title 14, Section 4850 et seq.). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

To be eligible for the CRHR, a prehistoric or historic-era property must be significant at the local, state, and/or federal level under one or more of the following four criteria. The resource:

- 1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- 2) Is associated with the lives of persons important in our past;
- 3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- 4) Has yielded, or may be likely to yield, information important in prehistory or history.

An eligible resource for the CRHR must meet one of the criteria of significance described above and retain enough of its historical character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed in the NRHP and those formally determined eligible for the NRHP;
- California Registered Historical Landmarks from No. 770 onward; and
- California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Resources that may be nominated to the CRHR include:

- Historical resources with a significance rating of Category 3 through 5 (properties identified as eligible for listing in the NRHP, the CRHR, and/or a local register);
- Individual historical resources;
- Historical resources contributing to historic districts; and
- Historical resources designated or listed as local landmarks or designated under any local ordinance, such as a historic preservation overlay zone.

Integrity of an Historical Resource

For a resource to be eligible for the CRHR, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. Integrity encompasses seven aspects: location, design, setting, materials, workmanship, feeling, and association (with an important historic person and/or event). A resource that does not retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the CRHR.

Compliance with the Secretary's Standards

CEQA Section 15164.5(3) notes that, "Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties shall be considered as mitigated to a level of less than significant impact on the historical resource."

Historical Resources

The CEQA Guidelines define a historical resource as: (1) a resource in the CRHR; (2) a resource included in a local register of historic resources, as defined in PRC Section 5020.1(k) or identified as significant in a historic resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Archeological Resources

CEQA considers archeological resources as an intrinsic part of the physical environment and, thus, requires for any project that has the potential to adversely affect archeological 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 Section 21083.2, CEQA Guidelines Section 15065).

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

- 1) listed on or determined eligible for listing on the CRHR (CEQA Guidelines Section 15064.5). This includes NRHP-listed or –eligible archeological properties.
- 2) listed in a “local register of historical resources”³
- 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 CRHR/NRHP because of the potential scientific value of the resource, that “has yielded, or may be likely to yield, information important in prehistory or history” (CEQA Guidelines Section 15064.5 (a)(3)). An archeological resource may be CRHR-eligible under other Evaluation Criteria, such as Criterion A, association with events that have made a significant contribution to the broad patterns of history; Criterion B, association with the lives of historically important persons; or Criterion C, 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 D may be different from 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)).

Evaluation of an Archeological Resource as Scientifically Significant

In requiring that a potentially affected archeological resource be evaluated as “an historical resource” that is an archeological site of sufficient scientific value to be CRHR-eligible, CEQA presupposes that the published guidance of the California OHP for CEQA serves 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 an Archeological Resource

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

For an archeological resource that is evaluated for CRHR-eligibility under Evaluation Criterion D, “has yielded or may be likely to yield information important to prehistory or history,” integrity is

³ A “local register of historical resources” is a list of historical or archeological properties officially adopted by ordinance or resolution by a local government (PRC 5020.1[k]).

conceptually different from how it is usually applied to the built environment. For a 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 a historical resource because of its prehistoric or historic 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 data 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 material is situated.

Mitigation of an Adverse Effect to an Archeological Resource

Preservation in place is the preferred treatment of an archeological resource (CEQA Section 21083.2(b); CEQA Guidelines Section 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 (CEQA Guidelines 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 Guidelines Section 15126.4(b)(3)(C). An appropriate curation facility is one 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)).

California Public Resources Code

Provisions for Paleontological Resource Protection

Section 5097.5 of the *Public Resources Code* prohibits “knowing and willful” excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under

state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission.

Effects on Human Remains

Under State law, human remains and associated burial items may be significant resources in two ways: (1) they may be significant to descendent communities for patrimonial, cultural, lineage, and religious reasons, and (2) 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), PRC 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 conflicting 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 descendents 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), PRC 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 48 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 (PRC 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 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)).

Local Regulations

San Francisco Historic Preservation Commission and Planning Code Articles 10 and 11

Created in 2008, the Historic Preservation Commission is a seven-member body that makes recommendations to the Board of Supervisors on the designation of landmark buildings, historic districts, and significant buildings. The Historic Preservation Commission replaces and retains

most of the responsibilities of the former Landmarks Preservation Advisory Board (Landmarks Board). The Landmarks Board was a nine-member body, appointed by the mayor, which served as an advisory board to the Planning Commission and the Planning Department. The Landmarks Board was established in 1967 with the adoption of Article 10 of the *Planning Code*. The work of the Landmarks Board, the Planning Department, and the Planning Commission has resulted in an increase of public awareness about the need to protect the City's architectural, historical, and cultural heritage.

The Historic Preservation Commission reviews and approves Certificates of Appropriateness for building permit applications that involve construction, alteration, or demolition of landmark sites and resources located within historic districts. The Historic Preservation Commission may also review and comment on projects affecting historical resources that are subject to environmental review under the CEQA.

Article 10 of the *Planning Code* describes procedures regarding the preservation of sites and areas of special character or special historic, architectural, or aesthetic interest or value, such as officially designated city landmarks and buildings included within locally designated historic districts. Article 11 of the *Planning Code* designated six downtown conservation districts.

4.7.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

Section 106 of the NHPA requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally-assisted undertaking, or issuing licenses or permits, must consider the effect of the proposed undertaking on historic properties. An historic property may include a prehistoric or historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior.

An adverse impact would occur if a proposed action results in an adverse change to a historic property that is listed in or eligible for inclusion in the NRHP. The specific Criteria of Effect and Adverse Effect, as defined in 36 CFR 800.9, used to evaluate an undertaking's effect on a historic property, are as follows:

- An undertaking has an effect on a historic property when it may alter the characteristics of the property that qualify the property for inclusion in the NRHP. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered.
- An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:
 - (1) Physical destruction, damage, or alteration of all or part of the property;
 - (2) Isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the NRHP;

- (3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- (4) Neglect of a property resulting in its deterioration or destruction; and
- (5) Transfer, lease, or sale of the property.

The analysis below also considers whether the undertaking would conflict with the 2007 PA.

Significance Criteria under CEQA

Implementation of the project could have a potentially significant impact on cultural resources if the project were to:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*;
- Cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Approach to Analysis

Architectural/Structural Resources. Potential impacts on architectural resources are assessed by identifying any project activities--such as new construction, demolition, or substantial alteration--on individual buildings or within identified historic districts that could affect resources that have been identified as historical resources for the purposes of NEPA or CEQA. Properties identified as historical resources under NEPA or CEQA include those that are significant (important) because of their association with important events, people, or architectural styles or master architects, or for their informational value (NRHP and CRHR Criteria A/1, B/2, C/3, and D/4) and that retain sufficient historic integrity to convey their significance. Criterion D/4, however, is typically applied to the evaluation of historic-period archeological resources and not to architectural resources, as described below. Once a resource has been identified as significant, it must be determined whether the impacts of the project would "cause a substantial adverse change in the significance" of the resource (CEQA Guidelines Section 15064.5[b]). A substantial adverse change in the significance of a historical resource means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired" (CEQA Guidelines Section 15064[b][1]). A historical resource is materially impaired through the demolition or alteration of the resource's physical characteristics that convey its historical significance and that justify its inclusion in the CRHR (CEQA Guidelines Section 15064.5[b][2][A]).

Archeological Resources. The significance of most prehistoric and historic-period archeological sites is usually assessed under NRHP and CRHR Criterion D/4. This criterion stresses the

importance of the information potential contained within the site, rather than its significance as a surviving example of a type or its association with an important person or event.

Paleontological Resources. The paleontological analysis identifies the potential to encounter paleontological resources (i.e., plant, animal, or invertebrate fossils or microfossils) during excavations associated with the project. The paleontological potential of the units to be disturbed was determined, and the potential to encounter paleontological resources at the site was evaluated. A potentially significant impact on paleontological resources would occur if: (1) construction of the project component would move or excavate previously undisturbed geologic bedrock (native rock); and (2) the bedrock to be disturbed has a high paleontological potential.

Human Remains. Human remains, including those buried outside of formal cemeteries, are protected under several state laws, including PRC Section 5097.98 and *Health and Safety Code* Section 7050.5. These laws are identified above under State Regulations. This analysis considers impacts including intentional disturbance, mutilation, or removal of interred human remains.

Proposed Project

Impact CP-1: Effects on Historical Resources

NEPA: The proposed project would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (No Impact)

CEQA: The proposed project would not cause a substantial adverse change in the significance of a historical resource, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code. (No Impact)

Based on the historic resources evaluation prepared for the project site,⁴ the C-APE contains no resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*, nor any resources listed in the NRHP. Although both the Sunnysdale and Velasco Housing Projects are more than 50 years old, and would meet the minimum age for potential listing in the federal and State registers, neither of these housing complexes nor associated landscape design are considered historical resources for CEQA purposes, as defined in CEQA Section 15064.5, or for NEPA purposes, as defined by NRHP listing criteria at 36 CFR 60.4. None of the buildings exemplify any important principles of public architectural design, nor are any of the buildings known to be associated with historic events or any persons of significance. The landscape design has been degraded due to a lack of maintenance and natural plant attrition, and retains little integrity. As such, none of the buildings or the landscape design is eligible for listing in the NRHP or the CRHR.

⁴ Carey & Co. Inc. Architecture. *Historic Resource Evaluation, Velasco Housing Project, San Francisco, California*, prepared for Sunnysdale Development Co., LLC, April 26, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The San Francisco Planning Department prepared a historic resource evaluation response (HRER) and determined that the Sunnydale-Velasco Housing Development is ineligible for listing in the National Register, California Register, or Local designation and therefore no historic properties would be affected by the proposed project.⁵

In summary, the Planning Department's HRER found that while Sunnydale project is one of the earliest public housing projects completed in San Francisco, the property has not made a significant or unique contribution to the development of the history of public housing in the region. Therefore, the subject property is not associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States. No persons of known historical significance are associated with the subject buildings. While the architectural design of Sunnydale reflects the "super-block" approach to site planning, it is not a distinctive example of this concept nor does the architecture break new ground or appear to mark a new direction for the architect (Albert F. Roller). Given the range of architectural styles Roller adopted over the course of his career, the Sunnydale project is neither unique nor significant within Roller's larger body of work. The subject property is not significant for its association with a master architect, nor does it appear to have distinctive characteristics of a type, period, or method of construction. Although the landscape design for Sunnydale was created by master landscape architect, Thomas D. Church, the existing landscape does not retain historical integrity, as there is too little remaining historic fabric to convey the original design intent or significance. The original plan, as evidenced by the drawings, used a combination of trees, hedges, and ground cover to arrange space, to make a distinction between public and private spaces, and to create spaces for people to use. Few of the trees and virtually none of the hedges and ground cover from the original design exist today. The Planning Department determined that the landscape lacks integrity of association, design, workmanship, materials, and feeling, and that the loss of these elements compromise the site such that it can no longer convey its potential significance as a mid-century landscape design.⁶

Pursuant to the Programmatic Agreement (PA), the City is not required to seek concurrence with SHPO when a property is determined to be ineligible for listing in the National Register and California Register. On July 16, 2012, the San Francisco MOHCD notified the California SHPO of the San Francisco Planning Department's conclusion that no historic properties would be affected by the proposed project.⁷ The proposed project would not cause a substantial adverse change to a historical resource.

⁵ San Francisco Planning Department, Historic Resource Evaluation Response, Date of Review, January 12, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ *Ibid.*

⁷ Office of Historic Preservation, Letter to Olson Lee, Mayor's Office of Housing and Community Development, City and County of San Francisco Re: Sunnydale-Velasco Housing HOPE Redevelopment. July 30, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

As no historical resources are located in the C-APE, the removal of the existing buildings and associated landscaping from the proposed project would result in *no impact* under NEPA because the proposed project would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior.

The project would result in *no impact* under CEQA because the proposed project would not cause a substantial adverse change in the significance of a historical resource, including those resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*.

Mitigation: None required.

Impact CP-2: Effects on Archeological Resources

NEPA: The proposed project could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The proposed project could cause a substantial adverse change in the significance of an archeological resource. (Less than Significant with Mitigation)

Based on the sensitivity assessment, the C-APE can be considered to have an overall low potential for archeological resources. The eastern-most portion of the C-APE does, however, have a moderate potential for containing buried archeological sites. Any such archeological material would probably only be preserved in contexts where the original historic-era land surface remains preserved below recent fill.

Therefore, the proposed project would involve grading, excavation, and soil disturbance that could affect archeological resources. A records search was conducted by reviewing pertinent Northwest Information Center (NWIC) base maps that reference cultural resources records and reports, historic-period maps, and literature for San Francisco County.⁸ The NWIC search (File No. 12-0001) did not identify any recorded archaeological resources in or near the C-APE. NWIC noted that based on the Archaeological Sensitivity Analysis (ASA) completed for the proposed project,⁹ there is a moderate possibility of identifying Native American archaeological resources and a low possibility of identifying historic-period archaeological resources in the project area.

NWIC recommended that the recommendations for further work outlined in the ASA be implemented including limited geoarchaeological coring in the eastern-most portion of the

⁸ Northwest Information Center (NWIC). Letter to San Francisco Mayor's Office of Housing and Community Development RE: Record search results for the proposed Sunnydale-Velasco Hope San Francisco Redevelopment Project, City of San Francisco, California. Sonoma State University, California Historical Resources Information System, NWIC File No.: 12-0001, July 5, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ Byrd and Allen, 2011.

project C-APE after detailed project design plans have been developed that show the full extent and depth of all project impacts. SHPO reiterated NWIC's recommendations.¹⁰

Although there is a low to moderate possibility of archeological resources, the potential exists for construction activities to encounter unknown archeological resources as described above. Therefore, construction impacts from the proposed project to previously undiscovered archeological resources could be significant. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-2, Archeological Testing Program**, which requires the development of presence or absence investigation for archeological resources and evaluation of whether any archeological resource encountered in the C-APE constitutes an historical resource under CEQA. This pre-construction investigation would reduce the likelihood of inadvertently disturbing significant archeological resources because the development team would be carefully looking for them in advance.

As the recommended investigations in **Mitigation Measure M-CP-2** cannot be completed until such time as the MOHCD has received an Authority to Use Grant Funds (AUGF) from HUD, it is necessary to enter into a Memorandum of Agreement (MOA) with the Office of Historic Preservation that that will outline the procedures and methodology the City will use to further identify potential historic properties within the archeological APE. On July 22, 2014, a MOA between the CCSF and the SHPO regarding the Sunnydale-Velasco HOPE SF Redevelopment Project was completed which requires an archaeological testing program.¹¹ These requirements have been reiterated in **Mitigation Measure M-CP-2, Archaeological Testing Program**.

Project operations would not result in additional ground disturbance, therefore project operations would not cause a substantial adverse change on an archaeological resource.

In summary, under NEPA, this impact would be *less than significant with mitigation* because the proposed project could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior, but the impact would be reduced to a less-than-significant level with implementation of identified mitigation measures.

Under CEQA, this impact would be *less than significant with mitigation* because the proposed project could cause a substantial adverse change in the significance of an archeological resource, but the impact would be reduced to a less-than-significant level with implementation of Mitigation Measure M-CP-2.

Mitigation Measure M-CP-2: Archeological Testing Program, p. 4.7-24.

¹⁰ Office of Historic Preservation, Letter to Olson Lee, Mayor's Office of Housing and Community Development, City and County of San Francisco Re: Sunnydale-Velasco Housing HOPE Redevelopment. July 30, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹¹ *Memorandum of Agreement Between the City and County of San Francisco and the State Historic Preservation Office Regarding the Sunnydale-Velasco HOPE SF Redevelopment Project*, July 22, 2014.

Impact CP-3: Effects on Paleontological Resources

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant with Mitigation)

Construction of the proposed project could result in inadvertent damage to, or destruction of, fossils that would possibly be unique and/or scientifically important. The potential for disturbance of significant paleontological resources is generally limited to excavation activities within previously undisturbed (i.e., in situ) geologic units. For most of the project site, the ground surface has been previously disturbed. However, deeper excavation could occur in areas that are underlain by previously undisturbed soils. As largely buried resources, the exact location or presence of fossils within undisturbed geologic units cannot be determined. As an initial step, the relative likelihood of encountering fossils was estimated based on the paleontological potential of the geologic unit.

As discussed in Section 3.7, a records search at the UCMP was conducted. The records search did not identify any existing fossil localities near the project area but did identify several fossil localities in the broader region within the same geologic units that could be disturbed by the project. Because a high percentage of project area is underlain by Pleistocene alluvium, which has high paleontological potential, construction activities have the potential to affect paleontological resources, a significant impact. The project sponsor would be required to implement Mitigation Measures M-CP-3a and M-CP-3b, which would require that the project sponsor retain a qualified paleontologist or geologist who would train on-site supervisors in charge of excavation to identify potential paleontological resources during ground-disturbing activities. If resources are discovered, Mitigation Measures M-CP-3c and M-CP-3d would be implemented, which would require halting of ground-disturbance until the importance of the find can be assessed, as well as construction monitoring by a qualified paleontologist if warranted. These measures would reduce impacts to paleontological resources to a less-than-significant level.

Operation of the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

In summary, the impact would be *less than significant with mitigation* under CEQA because the proposed project could directly or indirectly destroy a unique paleontological resource or site or unique geological feature, but Mitigation measure M-CP-3a through M-CP-3b would reduce the impact to a less-than-significant level.

Mitigation Measure M-CP-3a: Paleontological Resources Mitigation Program, p. 4.7-27.

Mitigation Measure M-CP-3b: Paleontological resources training, p. 4.7-28.

Mitigation Measure M-CP-3c: Assessment and salvage of potential fossil finds, p. 4.7-28.

Mitigation Measure M-CP-3d: Monitoring by a qualified Paleontologist during ground disturbing activities, p. 4.7-28.

Impact CP-4: Effects on Human Remains

NEPA: The proposed project could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The proposed project could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Based on the background research, geoarcheological assessment, and survey results, there is a low potential for the proposed project to uncover human remains. Although no known human burials have been identified within the project C-APE, the possibility of encountering human remains cannot be entirely discounted. Earthmoving activities associated with project construction could result in direct impacts on previously undiscovered human remains. Therefore, the potential impact regarding disturbance to human remains could be significant. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-4, Inadvertent Discovery of Human Remains**, which requires avoidance measures or the appropriate treatment of human remains if accidentally discovered during project implementation. Operation of the proposed project would not disturb any human remains, including those interred outside of formal cemeteries because no ground disturbance would occur after completion of construction activities.

Under NEPA, this impact would be *less than significant with mitigation* because the proposed project could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior, but identified mitigation would reduce the impact through avoidance or appropriate treatment.

Under CEQA, this impact would be *less than significant with mitigation* because the proposed project could disturb human remains, including those interred outside of formal cemeteries, but identified Mitigation Measure M-CP-4 would reduce the impact through avoidance or appropriate treatment.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains, p. 4.7-28.

Impact CP-5: Effects on Consistency with Cultural Resources Management Plans

NEPA: The proposed project could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. (Less than Significant with Mitigation)

CEQA: This topic is not covered under CEQA.

Construction and operation of proposed project could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. However, the 2014 MOA, and associated Mitigation Measure M-CP-2, provides more detailed and site-specific requirements for archaeological testing at the project than does the 2007 PA, resulting in a higher

level of protection of cultural resources. Mitigation Measures M-CP-2 and M-CP-4 would be applicable.

The project would result in an impact that would be *less than significant with mitigation* under NEPA.

Mitigation: Mitigation Measures M-CP-2 and M-CP-4.

Proposed Project Variant

The project variant would occur in the same location as the proposed project and require an equal level of demolition, excavation, and new construction. The effects and impacts described above for impacts CP-1 through CP-5 for the proposed project would be identical under the project variant.

Alternative A: Reduced Development / Density Alternative

Impact A-CP-1: Effects on Historical Resources

NEPA: The Reduced Development / Density Alternative would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (No Impact)

CEQA: The Reduced Development / Density Alternative would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code. (No Impact)

Construction and operation of Alternative A would result in *no impact* to historical resources under NEPA because there are no historical resources located in the C-APE and therefore the project would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior.

The alternative would result in a *no impact* to historical resources under CEQA because it would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*.

Mitigation: None required.

Impact A-CP-2: Effects on Archeological Resources

NEPA: The Reduced Development / Density Alternative could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative could cause a cause a substantial adverse change in the significance of an archeological resource. (Less than Significant with Mitigation)

Construction impacts for Alternative A would be the same as the proposed project and therefore could result in a substantial adverse change in the significance of an archeological resource. This would be a potentially significant impact. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-2, Archeological Testing Program**, which requires the development of presence or absence investigation for archeological resources and evaluation of whether any archeological resource encountered in the C-APE constitutes an historical resource under CEQA. Operation of Alternative A would not cause a substantial adverse change to an archaeological resource because this pre-construction investigation would reduce the likelihood of inadvertently disturbing significant archeological resources because the development team would be looking for them in advance.

The impact would be *less than significant with mitigation* under NEPA because the Reduced Development / Density Alternative could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior, but the impact would be reduced to a less-than-significant level with implementation of identified mitigation measures.

The impact would be *less than significant with mitigation* under CEQA because the Reduced Development / Density Alternative could cause a substantial adverse change in the significance of an archeological resource, but the impact would be reduced to a less-than-significant level with implementation of Mitigation Measure M-CP-2.

Mitigation Measure M-CP-2: Archeological Testing Program, p. 4.7-24.

Impact A-CP-3: Effects on Paleontological Resources

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative could directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant with Mitigation)

Construction of Alternative A would be in the same location as the proposed project and could result in inadvertent damage to, or destruction of, fossils that would possibly be unique and/or scientifically important. This would be a potentially significant impact. Because a high percentage

of project area is underlain by Pleistocene alluvium, which has high paleontological potential, the project sponsor would be required to implement Mitigation Measures M-CP-3a and M-CP-3b. If resources are discovered, implementation of Mitigation Measures M-CP-3c and M-CP-3d would be required. Operation of Alternative A would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature because operation would not involve excavation.

Implementation of **Mitigation Measures M-CP-3a through M-CP-3d** would ensure that impacts would be *less than significant with mitigation* under CEQA because they would require retainage of a qualified professional would train on-site supervisors in charge of excavation to identify potential resources during ground-disturbing activities, as well as require halting of ground-disturbance until the importance of the find can be assessed, as well as construction monitoring by a qualified paleontologist if warranted.

Mitigation Measure M-CP-3a: Paleontological Resources Mitigation Program, p. 4.7-27.

Mitigation Measure M-CP-3b: Paleontological resources training, p. 4.7-28.

Mitigation Measure M-CP-3c: Assessment and salvage of potential fossil finds, p. 4.7-28.

Mitigation Measure M-CP-3d: Monitoring by a qualified Paleontologist during ground disturbing activities, p. 4.7-28.

Impact A-CP-4: Effects on Human Remains

NEPA: The Reduced Development / Density Alternative could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Construction of Alternative A would be in the same location as the proposed project and could result in inadvertent discovery of human remains, including those interred outside of formal cemeteries. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-4, Inadvertent Discovery of Human Remains**, which requires avoidance measures or the appropriate treatment of human remains if accidentally discovered during project implementation. Operation of Alternative A would not affect human remains because operation would not involve excavation.

Under NEPA, this impact would be *less than significant with mitigation* because the Reduced Development / Density Alternative could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior, but identified Mitigation Measure M-CP-4 would reduce the impact to a less-than-significant level through avoidance or appropriate treatment.

Under CEQA, this impact would be *less than significant with mitigation* because the Reduced Development / Density Alternative could disturb human remains, including those interred outside of formal cemeteries, but identified Mitigation Measure M-CP-4 would reduce the impact to a less-than-significant level through avoidance or appropriate treatment.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains, p. 4.7-28.

Impact A-CP-5: Effects on Consistency with Cultural Resources Management Plans

NEPA: The Reduced Development / Density Alternative could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. (Less than Significant with Mitigation)

CEQA: This topic is not covered under CEQA.

Construction and operation of Alternative A could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. However, the 2014 MOA, and associated Mitigation Measure M-CP-2, provides more detailed and site-specific requirements for archaeological testing at the project than does the 2007 PA, resulting in a higher level of protection of cultural resources. Mitigation Measures M-CP-2 and M-CP-4 would be applicable. The impact would be *less than significant with mitigation* under NEPA.

Mitigation: Mitigation Measures M-CP-2 and M-CP-4.

Alternative B: One-for-One Replacement Alternative

Impact B-CP-1: Effects on Historical Resources

NEPA: The One-for-One Replacement Alternative would not have an adverse effect on an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (No Impact)

CEQA: The One-for-One Replacement Alternative would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5, including those resources listed in Article 10 or Article 11 of the *San Francisco Planning Code*. (No Impact)

As no historical resources are located in the C-APE, Alternative B would result in *no impact* under NEPA because it would have no potential to affect an historic-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior.

The alternative would result in a *no impact* under CEQA because would not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines

Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*.

Mitigation: None required.

Impact B-CP-2: Effects on Archeological Resources

NEPA: The One-for-One Replacement Alternative could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative could cause a substantial adverse change in the significance of an archeological resource. (Less than Significant with Mitigation)

Alternative B would require less excavation and grading than either the proposed project or Alternative A, given that buildings and streets would be demolished and rebuilt in approximately the same locations as under existing conditions. Therefore, construction impacts for Alternative B would be less than the proposed project. Regardless, excavation and grading under Alternative B could result in a substantial adverse change in the significance of an archeological resource. This would be a potentially significant impact. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-2, Archeological Testing Program**, which requires the development of presence or absence investigation for archeological resources and evaluation of whether any archeological resource encountered in the C-APE constitutes an historical resource under CEQA. Operation of the alternative would not require excavation, and therefore would not affect archeological resources.

Under NEPA, this impact would be *less than significant with mitigation* because the One-for-One Replacement Alternative could have an adverse effect on a prehistoric-era district, site, building, structure, or objects listed in, or eligible for listing in, the NRHP maintained by the U.S. Secretary of the Interior, but the impact would be reduced to a less-than-significant level with implementation of identified mitigation measures.

Under CEQA, this impact would be *less than significant with mitigation* because the One-for-One Replacement Alternative cause a substantial adverse change in the significance of an archeological resource, but the impact would be reduced to a less-than-significant level with implementation of identified mitigation measures.

Mitigation Measure M-CP-2: Archeological Testing Program, p. 4.7-24.

Impact B-CP-3: Effects on Paleontological Resources

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative could directly or indirectly destroy a unique paleontological resource or site or unique geological feature. (Less than Significant with Mitigation)

Construction of Alternative B would result in less excavation and grading than either the proposed project or Alternative A, given the streets, parking lots, and buildings would be reconstructed in approximately the same locations as under existing conditions. Regardless, this excavation and grading could result in inadvertent damage to, or destruction of, fossils that would possibly be unique and/or scientifically important. This would be a potentially significant impact. Because a high percentage of project area is underlain by Pleistocene alluvium, which has high paleontological potential, the project sponsor would be required to implement Mitigation Measures M-CP-3a and M-CP-3b. If resources are discovered, Mitigation Measures M-CP-3c and M-CP-3d would be required. Operation of Alternative B would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature because it would not involve substantial ground-disturbing activities.

Implementation of **Mitigation Measures M-CP-3a** through **M-CP-3d** would ensure that impacts would be *less than significant with mitigation* under CEQA because they would require retainage of a qualified professional would train on-site supervisors in charge of excavation to identify potential resources during ground-disturbing activities, as well as require halting of ground-disturbance until the importance of the find can be assessed, as well as construction monitoring by a qualified paleontologist if warranted.

Mitigation Measure M-CP-3a: Paleontological Resources Mitigation Program, p. 4.7-27.

Mitigation Measure M-CP-3b: Paleontological resources training, p. 4.7-28.

Mitigation Measure M-CP-3c: Assessment and salvage of potential fossil finds, p. 4.7-28.

Mitigation Measure M-CP-3d: Monitoring by a qualified Paleontologist during ground disturbing activities, p. 4.7-28.

Impact B-CP-4: Effects on Human Remains

NEPA: The One-for-One Replacement Alternative could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative could disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Construction of Alternative B would be in the same location as the proposed project and could result in inadvertent discovery of human remains, including those interred outside of formal

cemeteries. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure M-CP-4, Inadvertent Discovery of Human Remains**, which requires avoidance measures or the appropriate treatment of human remains if accidentally discovered during project implementation. Operation of Alternative B would not disturb any human remains, including those interred outside of formal cemeteries because operation would not involve substantial ground-disturbing activities.

Under NEPA, this impact would be *less than significant with mitigation* because the One-for-One Replacement Alternative could have an adverse effect on historic-era or prehistoric-era human remains eligible for listing in the NRHP maintained by the U.S. Secretary of the Interior, but identified mitigation would reduce the impact to a less-than-significant level through avoidance or appropriate treatment.

Under CEQA, this impact would be *less than significant with mitigation* because the One-for-One Replacement Alternative could disturb human remains, including those interred outside of formal cemeteries, but identified mitigation would reduce the impact to a less-than-significant level through avoidance or appropriate treatment.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains, p. 4.7-28.

Impact B-CP-5: Effects on Consistency with Cultural Resources Management Plans

NEPA: The One-for-One Replacement Alternative could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. (Less than Significant with Mitigation)

CEQA: This topic is not covered under CEQA.

Construction and operation of Alternative B could be inconsistent with established management plans and agreements for cultural resources, including the 2007 PA. However, the 2014 MOA, and associated Mitigation Measure M-CP-2, provides more detailed and site-specific requirements for archaeological testing at the project than does the 2007 PA, resulting in a higher level of protection of cultural resources. Mitigation Measures M-CP-2 and M-CP-4 would be applicable. The impact would be *less than significant with mitigation* under NEPA.

Mitigation: Mitigation Measures M-CP-2 and M-CP-4.

Alternative C: No Action Alternative

Alternative C would not cause any impacts to cultural or paleontological resources as no ground disturbing activities would occur. As no impacts to historical, archaeological, paleontological resources or human remains would result, there would be *no impact* under NEPA, and there would be *no impact* under CEQA.

Mitigation: None required.

4.7.3 Cumulative Impacts

Impact CC-CP: Cumulative Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative cultural resource impacts. (No Impact)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative cultural resource impacts. (No Impact)

Proposed Project, Variant, and Alternatives A and B

This analysis recognizes that cumulative effects involving cultural resources could occur beyond the project site because cultural resources can include a resource type or theme, such as historic ethnic sites or an industry (e.g., railroads), that occur throughout a larger geographic context. Thus, this analysis considers cumulative development projects that are located immediately adjacent to the project site and in the general vicinity, as well as major regional projects, particularly those along and within the Bay. These include the 700-acre Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project located about 2 miles east of the project site, the Visitacion Valley/Schlage Lock SUD approximately 1 mile east of the project site, and the Executive Park Sub Area Plan SUD planned for the approximately 70-acre area between Candlestick Point and Highway 101.

The Visitacion Valley/Schlage Lock SUD, specifically, included the recent demolition of numerous historic buildings at the former Schlage Lock site, located approximately 0.6 mile east of the project site. Impacts to historic resources were determined to be significant and unavoidable because demolition of such resources could not be mitigated to a less-than-significant level, even with incorporation of mitigation measures such as photo-documentation and public interpretation.¹² These past impacts to historic resources at the Schlage Lock site would not combine with impacts of the proposed project to form a significant cumulative impact to historic resources because the proposed project would have no impact to historical resources and thus has no potential to contribute to any cumulative historic resources impact.

Similarly, there are no nearby past, present, or reasonably foreseeable future developments in the vicinity that could result in significant effects on archaeological or paleontological resources or human remains through accidental discovery and damage, and that are located close enough to

¹² San Francisco Redevelopment Agency, *Visitacion Valley Redevelopment Program, Draft EIR*, May 29, 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

combine with the effects of the project development scenarios to create a significant cumulative impact. Other developments would be required to adhere to all regulatory requirements regarding avoidance of significant impacts (similar to **Mitigation Measures M-CP-2, M-CP-3a, M-CP-3b, M-CP-3c, M-CP-3d, and M-CP-4** identified for the project development scenarios).

The proposed project, variant, or alternatives, combined with other cumulative development, would not result in a significant cumulative impact on cultural resources.

As no cumulative impacts to historical, archaeological, paleontological resources or human remains would result, the impact would be *no impact* under NEPA.

Similarly, there would be *no impact* under CEQA.

4.7.4 Mitigation Measures

Mitigation Measure M-CP-2: Archeological Testing Program.

An Archeological Testing Program shall be developed to ascertain whether archeological material may be preserved underneath recent fill within the project C-APE. This effort shall entail geoarcheological coring of the eastern-most portion of the project C-APE—in project blocks 1 through 8 east of Santos Street—and shall take place after detailed project design plans have been developed that show the full extent and depth of project construction activity. Additional pre-field investigations into the cut and fill history of the project C-APE should also be undertaken. With these additional data sets, the precise placement and depth of cores can be determined in order to ensure testing coverage is sufficient to identify any unknown archeological material that would be impacted by construction activities.

Based on a reasonable presumption that archeological resources may be present within the project area, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried archeological resources. The project sponsor shall retain the services of an archaeological consultant qualified in geoarcheology from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The project sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archeological consultants on the QACL. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the ERO. 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. Archeological 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 archeological resource as defined in CEQA Guidelines Section 15064.5 (a)(c).

Consultation with Descendant Communities. On discovery of an archeological site¹³ an appropriate representative¹⁴ of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to consult with the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Plan. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological 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 archeological testing program shall be to determine to the extent possible the presence or absence of archeological resources and to identify and evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological 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 archeological resource; or
- B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological 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 archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities,

¹³ By the term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

¹⁴ An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission.

such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context;

- The archeological 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 archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological 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 archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological 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 archeological resource is expected to contain. That is, the ADRP shall 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 archeological 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 archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological 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.

Final Archeological Resources Report. The archeological consultant shall submit a Draft 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 testing/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.

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, 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 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.

Mitigation Measure M-CP-3a: Paleontological Resources Mitigation Program.

Prior to ground disturbance, the project sponsor shall retain a qualified paleontologist (is a practicing scientist who is recognized in the paleontologic community and is proficient in vertebrate paleontology) or a California Professional Geologist with appropriate paleontological expertise to carry out all mitigation measures related to paleontological resources. The qualified paleontologist or geologist shall be available “on-call” to project sponsor throughout the duration of ground-disturbing activities.

Mitigation Measure M-CP-3b: Paleontological resources training.

All construction forepersons and field supervisors conducting or overseeing subsurface excavations shall be trained by a qualified paleontologist in the recognition of potential fossil materials prior to ground disturbing activities. A one hour pre-construction training on paleontological resources shall also be provided to all other construction workers, but may include videotape of the initial training and/or the use of written materials rather than in person training by the qualified paleontologist. In addition to fossil recognition, the training shall convey procedures to follow in the event of a potential fossil discovery.

Mitigation Measure M-CP-3c: Assessment and salvage of potential fossil finds.

If potential fossils are discovered during construction, all earthwork or other types of ground disturbance in the immediate vicinity of the find shall stop until the qualified paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. If salvage is required, recommendations shall be consistent with current professional standards outlined in the Society of Vertebrate Paleontology, Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines. If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection.

Mitigation Measure M-CP-3d: Monitoring by a qualified paleontologist during ground disturbing activities.

If fossils are discovered during construction, a qualified paleontologist shall determine whether monitoring shall be required during remaining ground disturbing activities. If required, a qualified paleontologist, a California Professional Geologist with appropriate paleontological expertise, or paleontological monitor working under the supervision of a qualified paleontologist shall monitor ground-disturbing activities. This monitoring shall consist of periodically inspecting disturbed, graded, and excavated surfaces, as well as soil stockpiles and disposal sites. The frequency of monitoring would be determined by the qualified paleontologist. If the monitor encounters a paleontological resource, he or she shall assess the fossil, and record or salvage it as described in M-CP-2c.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

The following measures shall be implemented in the event of the discovery, or anticipated discovery, of human remains and associated burial-related cultural materials:

The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activities shall comply with applicable state laws. This shall include immediate notification of the coroner of the county within which the project is located and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). The archeological consultant, the project sponsor, ERO, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement shall

take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The PRC allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project sponsor shall follow Section 5097.98(b) of the PRC, which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

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4.8 Transportation and Circulation

4.8.1 Regulatory Framework

State

California Department of Transportation (Caltrans)

A TR-0100 permit from Caltrans is required for utilities, developers, and non-profit organizations to use the state highway system to conduct activities other than transportation (e.g., landscape work, utility installation, film production) within the right-of-way. The application would be forwarded to Caltrans District 4, whose jurisdiction includes the proposed project site. Part 6 of the Caltrans' *Manual on Uniform Traffic Control Devices* provides Traffic Controls for Construction and Maintenance Work Zones.¹ Additionally, the transport of oversize or overweight loads would require approval from Caltrans.

Regional and Local

San Francisco General Plan

Transportation Element

The *Transportation Element* of the *General Plan* comprises objectives and policies that relate to the nine aspects of the citywide transportation system: General, Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Movement.

San Francisco City Charter – Transit First Policy

The City's Transit First Policy (Section 8A.115 of City Charter), adopted by the Board of Supervisors in 1973, was developed in response to the damaging impacts over previous decades of freeways on the city's urban character. The policy is aimed at restoring balance to a transportation system long dominated by the automobile, and improving overall mobility for residents and visitors whose reliance chiefly on the automobile would result in severe transportation deficiencies. It encourages multi-modalism, i.e., the use of transit and other alternatives to the single-occupant vehicle as modes of transportation, and gives priority to the maintenance and expansion of the local transit system and the improvement of regional transit coordination.

¹ California Manual on Uniform Traffic Control Devices, 2012 Edition. Part 6 – Temporary Traffic Control. Available online at: <http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2012/Part6.pdf>, accessed on April 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

San Francisco Bicycle Plan

In August 2009, the Board of Supervisors approved the *San Francisco Bicycle Plan* (Bicycle Plan).² The Bicycle Plan includes a citywide bicycle transportation plan comprising a “Policy Framework” and a “Network Improvement” document) and implementation of specific bicycle improvements identified within the Bicycle Plan. The Bicycle Plan includes objectives and identifies policy changes that would enhance the city’s “bike-ability.” It also describes the existing bicycle route network (a series of interconnected streets in which bicycling is encouraged), and identifies gaps within the citywide bicycle route network that require improvement. The Bicycle Plan updates the 1997 San Francisco Bicycle Plan. The Final Environmental Impact Report for the Bicycle Plan assessed a total of 56 short-term and long-term bicycle improvement projects. There are no bicycle projects in the adopted the Bicycle Plan that are in proximity to the proposed project. Short-term bicycle improvement projects in the vicinity of the project site include new bike lanes along Bayshore Boulevard between Silver Avenue and Oakdale Avenue.

4.8.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

NEPA analysis for traffic and transportation analysis utilizes local standards in evaluating the context and intensity of effects. Please see below under “Significance Criteria Under CEQA.”

Significance Criteria under CEQA

The City generally considers that implementation of the project could have a significant impact related to transportation and circulation if it were to:

- Conflict with an applicable plan, ordinance, or policy establishing a measure of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including but not limited to level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;

² San Francisco Municipal Transportation Agency, San Francisco Bicycle Plan, June 26, 2009. Available online at: http://www.sfmta.com/cms/bproj/documents/San_Francisco_Bicycle_Plan_June_26_2009_002.pdf, accessed on April 19, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

These impact criteria will also apply for NEPA analysis.

Applying these impact criteria, the proposed project would result in a significant impact with respect to transportation and circulation if the following conditions occur:

- The operational impact on signalized intersections is considered significant when proposed project-generated traffic would cause the LOS at a signalized intersection to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F as a result of the addition of project traffic; or, for an unsignalized intersection, cause the LOS at the worst-operating approach³ to deteriorate from LOS D or better to LOS E or F (where Caltrans signal warrants would be met) or cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F. The proposed project may result in significant adverse impacts at intersections that operate at LOS E or F under baseline conditions depending upon the magnitude of the proposed project's contribution to the worsening of the average delay per vehicle. In addition, the 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.
- The operation impact on freeway ramps is considered significant when a Proposed Project-generated traffic would cause the level of service to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F. In addition, the Proposed Project would have a significant effect if it would contribute substantially to ramp volumes already operating at LOS E or F.
- The proposed project would have a significant effect if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service (measured by capacity utilization in excess of an operator's standard) or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result.
- The 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.
- The proposed project would have a significant effect if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.
- The proposed project would have a significant effect if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within

³ An "approach" to an intersection represents vehicles entering the intersection on one street from one direction.

proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians.

- The proposed project would have a significant effect if it would result in inadequate emergency access.
- Construction-related impacts generally would not be considered significant due to their temporary and limited duration.

As described in Section 4.1, Impact Overview, *Public Resources Code* 21099 provides that “aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment” under CEQA.⁴ The proposed project meets these criteria. Accordingly, parking impacts are not considered in this analysis.

Approach to Analysis

This analysis of transportation and circulation impacts utilizes the significance criteria to evaluate the potential effects of the proposed project and alternatives on key intersections, transit, bicycle, pedestrian, loading, as well as emergency access, traffic safety, and construction activities, and identifies measures necessary to mitigate significant impacts. The following nine impact analysis scenarios were analyzed to determine the extent to which the proposed project and its alternatives may affect the surrounding transportation environment:

- Existing Plus Proposed Project Conditions;
- Existing Plus Proposed Project Variant Conditions;
- Existing Plus Reduced Development/Density Alternative Conditions;
- Existing Plus One-For-One Replacement Alternative Conditions;
- Future (Years 2030 and 2040) Cumulative Conditions
- Future Cumulative Plus Proposed Project Conditions;
- Future Cumulative Plus Proposed Project Variant Conditions;
- Future Cumulative Plus Reduced Development/Density Alternative Conditions;
- Future Cumulative Plus One-for-One Replacement Alternative Conditions;

The analysis of the development associated with the proposed project was conducted for existing (2010 baseline) and cumulative (2030 and 2040) conditions. The Existing Plus Project conditions assess the near-term impacts of the projected development under each alternative, while future cumulative conditions assess the long-term impacts of the proposed project in combination with other foreseeable future development under each alternative.

The geographic context for the analysis of cumulative transportation impacts is the local roadway network within the vicinity of the proposed project, and transit operations within San Francisco.

⁴ Public Resources Code Section 21099.

The cumulative analysis is based on 2030 and 2040 conditions as projected by the San Francisco County Transportation Authority model. The project impacts related to bicycle and pedestrian circulation, loading supply and demand, emergency vehicle access, and construction would be localized and site-specific, and would not contribute to impacts from other development and infrastructure projects in San Francisco. Therefore, future year 2030 and 2040 cumulative impacts are analyzed for traffic and transit operations only.

Cumulative Year Development

The growth in future background traffic volumes under the Future Year 2030 scenario was estimated based on the combination of traffic forecast data obtained from the *Candlestick Point – Hunters Point Shipyard Phase II Development Plan Transportation Study* (primarily for Bayshore Boulevard) and the San Francisco County Transportation Authority’s (SFCTA’s) transportation demand forecasting model outputs containing traffic assignments for the p.m. peak periods for the Years 2005 and 2030 (for the remaining streets in the study area). The transportation impact study (see **Appendix TR**) includes a technical memorandum which describes the methodology used to develop growth rates at the study intersections.

To evaluate beyond 2030, an in response to the Planning Department’s updated methodology for evaluation cumulative impacts, the project trip generation was updated for the 2040 year using the modal split assumptions found in the 2012 American Community Survey data, and future cumulative traffic volumes for year 2040 were developed using the latest SF-CHAMP model outputs.⁵

The cumulative conditions also assume that Geneva Avenue is extended to the east of Bayshore Boulevard to connect to Harney Way and U.S. 101 because, as further described under “Roadway Improvement Projects,” below, a key recommendation of the San Francisco–San Mateo Bi-County Study is the extension of Geneva Avenue from its intersection with Bayshore Boulevard to U.S. 101 with a connection to Harney Way. Consequently, different traffic assignments were used for the cumulative conditions from the existing conditions. For example, currently 100 percent of traffic from U.S. 101 southbound use the Bayshore Boulevard off-ramp, but these trips were assumed to be equally split between the Bayshore Boulevard and the proposed Harney Way off-ramps under the Future Cumulative conditions.

The SFMTA recently prepared a preliminary assessment of the proposed Bus Rapid Transit (BRT) route along Geneva Avenue from Bayshore Boulevard to Ocean Avenue. Implementation of the Geneva Avenue BRT may eliminate the existing parking lane(s) along Geneva Avenue, but the proposed alignment would not reduce roadway capacity for vehicle travel. Therefore, the existing roadway configuration is used for the cumulative conditions.

⁵ The American Community Survey (ACS) is conducted every year to provide up-to-date information about the social and economic needs of communities, whereas the census is conducted every 10 years to provide an official count of the entire U.S. population to Congress.

Transportation System Improvements

Roadway Improvement Projects

SFCTA, in partnership with several government agencies from the City and County of San Francisco and the County of San Mateo, prepared a Bi-County Transportation Study (the Bi-County Study) to assess transportation impacts and transportation infrastructure improvements needed to accommodate the proposed land uses in the vicinity of the San Francisco-San Mateo County border. A key recommendation of the Bi-County Study is the extension of Geneva Avenue from the intersection of Geneva Avenue and Bayshore Boulevard to U.S. 101 with a connection to Harney Way and improvements to U.S. 101 interchange at Harney Way, which is under the jurisdiction of the City of Brisbane. This improvement was incorporated into the future cumulative conditions scenario.

Transit Improvement Projects

There are several transit improvement projects planned in the vicinity of the project site, as described below. However, because the following projects are either under review and/or have no scheduled year of implementation, these projects were not included in the future cumulative conditions scenario.

Relocation of Caltrain Bayshore Station – As part of the Bi-County Study, SFCTA is evaluating the potential of relocating all or portions of the Caltrain Bayshore Station to connect with Muni's proposed light rail and bus rapid transit station near the intersection of Tunnel Road and Geneva Avenue. The project is currently undergoing a Feasibility Study.⁶

T Third Extension – The Muni T Third light rail service, which connects the Visitacion Valley to downtown San Francisco, currently terminates at the intersection of Bayshore Boulevard and Sunnysdale Avenue. Muni has a plan to extend the T Third to the east of Bayshore Boulevard with a new terminus adjacent to the current Caltrain Bayshore Station. The project is partially funded and is a candidate for inclusion on the San Francisco – San Mateo Bi-County priority project list.⁷

Geneva Avenue BRT – Separate from the Geneva Avenue Extension project, Muni is planning for the development of a new BRT line that would provide a transit connection in the east-west direction between the Balboa BART Station and the proposed developments in the Hunters Point Shipyard and Candlestick Point. The proposed BRT alignment would primarily travel along the existing Geneva Avenue and extend eastward to Harney Way on the east side of U.S. 101. The project would be implemented as part of the Candlestick Point – Shipyard Point Phase II Development Plan.

Muni Express and Local Buses – Muni currently operates several local bus lines (e.g., 8X, 8BX, 9, 56) along Bayshore Boulevard. These bus lines would be rerouted in the future to connect with a future Bayshore Intermodal Station; however, no rerouting plan is currently available.

⁶ San Francisco Planning Department, *Request for Proposals for the Bayshore Station Location Study*, May 28, 2014.

⁷ San Francisco County Transportation Authority, *Bi-County Transportation Study: Final Report*, March 2013.

Bicycle Improvement Projects

The SFMTA has plans for long-term and minor bicycle improvements in the vicinity of the project site; however, none of these projects are included in the *San Francisco Bicycle Plan* (see discussion in Section 4.8.1, *Regulatory Framework*). Long-term improvements are proposed for Route 705 on Mansell Street. This route currently ends at the intersection with Visitacion Avenue, but the long-term improvements would extend the route to Alemany Street in the west. In addition, minor improvements are proposed for Route 90 on Geneva Avenue between Moscow Street and Brookdale Avenue and for Route 25 on San Bruno Avenue between Bayshore Boulevard and Caro Street. Minor improvements would address gaps and deficiencies in the bicycle route network. Specific designs for long-term and minor improvements have not been developed yet. As such, these planned bicycle improvements were not included in the future cumulative conditions scenario.

Project On-Site Improvements

Roadway Improvements

As described in Section 3.8.2, under Site Access, the proposed project would change the existing street layout in the project site. As shown in Figure 2-3 (see Chapter 2), the proposed project would realign Sunnydale Avenue, Brookdale Avenue, Blythedale Avenue, and Santos Street. Brookdale Avenue would be extended northward to connect to Sunnydale Avenue, and its east-west segment would be replaced by Center Street, which ends at the west side of the proposed Mid-Terrace Park and continues on the east side of the park. Blythedale Avenue would be straightened and extended north via “A” Street to Hahn Street. As a result, five new streets (Center Street, “A”, “B”, “C”, and “D” Streets⁸) and 12 new additional intersections would be created in the project site. The primary access routes to the project site would remain along Sunnydale Avenue, Santos Street, and Brookdale Avenue. The existing traffic calming elements (i.e., curb blocks) at the intersection of Sunnydale Avenue and Santos Street would be removed as part of the street reconfiguration, and new streets would have bulb-outs and stop-signs at all intersections. All streets are proposed as public streets and would be maintained by the City.

Transit Improvements

The proposed project would relocate some of the existing bus stops along Sunnydale Avenue and Santos Street as a result of the new street layout. The changes include the following:

- Consolidate the inbound and outbound bus stops serving Route 9 on Sunnydale Avenue west of Santos Street (two in each direction) to nearside bus stops (one in each direction) at the intersection of Sunnydale Avenue and “C” Street.
- Relocate the inbound far-side bus stop at the intersection of Hahn Street and Sunnydale Avenue, which serves Routes 8X and 8BX, to the nearside southwest corner of the intersection, and install a 55-foot bus bulb-out.

⁸ Street names would need to conform to the City system and be approved by the City.

- Relocate the inbound far-side bus stop at the intersection of Santos Street and Sunnydale Avenue, which serves Routes 8X and 8BX, to the nearside southeast corner of the intersection, and install a 55-foot bus bulb-out.
- Remove the inbound and outbound bus stops at the intersection of Brookdale Avenue and Santos Street, which currently serves Routes 9, 8X, and 8BX.

The route terminus for 9 San Bruno would remain at the same location as the existing condition on Sunnydale Avenue, approximately 600 feet west of the project site within McLaren Park.⁹

Vehicle and Bicycle Parking Improvements

The proposed project would provide 1,437 off-street and 500 on-street parking spaces for a total of 1,937 parking spaces. In addition, bicycle parking spaces would be provided both in private garages and within the public parks and sidewalks; the number of bicycle spaces would be established as part of the proposed SUD. Nine car-share parking spaces would be provided behind the senior housing building on Center Street. All off-street residential parking spaces would be provided in the parking garages in residential buildings, and parking spaces for the retail and community uses would be provided on the street only. In addition, an off-street loading dock would be provided at the senior housing building, which would be accessible from "A" Street (see Figure 2-1, in Chapter 2).

Travel Demand Analysis

The travel demand described below refers to the new vehicle, transit, pedestrian and bicycle trips generated by the land uses to be developed by the proposed project.

Trip Generation

The daily and p.m. peak-hour person trips for the residential and retail uses were based on the trip generation rates and the peak-hour factors provided in the San Francisco Planning Department's *Transportation Impact Analysis Guidelines for Environmental Review (San Francisco Guidelines)*. Trip generation for the community service center was based on the Institute of Transportation Engineers (ITE) trip rate for Recreational Community Center (Land Use 495). As presented in Chapter 2, Project Description, the proposed project would construct 1,700 dwelling units, 16,200 gross square feet (gsf) of retail space, and 72,500 gsf of recreation/community center. Based on ITE trip rates, it is estimated that the proposed project would generate a total of 19,167 daily (one-way) person trips and 2,805 p.m. peak-hour person trips.

Because the proposed project would demolish the existing 785 dwelling units and 29,500 gsf of daycare/community center, the trip generation process involved taking the total estimated trip generation based on the proposed land use plans and subtracting the trips associated with the existing uses in order to account for the net increase in trips due to the proposed project (increasing

⁹ Per request of SFMTA, the terminus of 9 San Bruno could potentially be relocated to the southwest corner of the Sunnydale Avenue/ Brookdale Avenue intersection; however, the decision has not yet been finalized at this time.

from 785 dwelling units to 1,700 dwelling units). Therefore, it is estimated that the proposed project would generate a net total of 10,914 daily person trips and 1,483 p.m. peak-hour person trips.

Mode Split

The estimated net new person trips (as discussed above) were assigned to different transportation modes to determine the number of auto-person, transit, and other trips to and from the project site. Mode split rates for the residential use were obtained from the *2000 US Census* for Census Tract 605.02. The modal split rates for the retail and community center uses were based on the information contained in the *San Francisco Guidelines* for Superdistrict 3. The proposed project would generate approximately 6,086 net new auto person trips, 3,749 transit trips, 748 walking trips, and 331 other trips (bike, etc.) on a typical day. During the p.m. peak hour, the proposed project would generate 812 auto person trips, 562 transit trips, 67 walking trips, and 42 other mode trips.

In order to estimate the net new vehicle trips generated by the proposed project, vehicle trips were calculated by dividing the auto person trips by the vehicle occupancy rates. The vehicle occupancy rates for the residential development were obtained from the *2000 US Census* for Census Tract 605.02, and the vehicle occupancy rates for retail and community center uses were based on the information contained in the *San Francisco Guidelines* for Superdistrict 3. As a result, the proposed project would generate approximately 4,425 net new daily vehicle trips and 621 p.m. peak-hour vehicle trips. Of these estimated p.m. peak-hour vehicle trips, approximately 394 trips (63 percent) would occur in the inbound direction, into the project site, and 227 trips (37 percent) would occur in the outbound direction, away from the project site. These trips were assigned to the roadway network to determine traffic impacts associated with the proposed project.

Trip Distribution

The project-generated person trips are assigned to general regional destinations and origins, including four San Francisco Superdistricts (northeast, northwest, southeast, and southwest San Francisco), the East Bay, the North Bay, the South Bay, and areas outside the region (see transportation impact study in Appendix TR for description and illustration of San Francisco Superdistricts). Trip distribution percentages for the residential use were based on the *2000 US Census Data* for Census Tract 605.02.¹⁰ Trip distribution percentages for the retail and community uses were based on the information contained in the *San Francisco Guidelines* for Superdistrict 3.

Project Vehicle and Transit Trip Distribution

Based on the person trip distribution patterns, weekday p.m. peak-hour vehicle and transit trips were extracted for each origin by multiplying work and non-work trips and by distribution percentages for each origin. Percentages for inbound and outbound trips for residential and retail uses were obtained from the information contained in the *San Francisco Guidelines*. It assumes that for residential uses, 100 percent of all work trips and 33 percent of non-work trips are inbound trips

¹⁰ In order to ensure the representativeness of data obtained from Census Tract 605.02 for the Proposed Project, the trip distribution patterns of surrounding tracts (i.e., Census Tracts 264.01 and 264.02) were also examined. These tracts show similar trip distribution patterns (see Appendix TR).

during the p.m. peak period; for retail uses, 100 percent of work trips and 50 percent of non-work trips are outbound trips during the p.m. peak period. For recreation and community center, directional split is based on the *ITE Trip Generation*, which assumes 37 percent of trips in the inbound direction and 63 percent of trips in the outbound direction during the p.m. peak period.

Loading Demand Analysis

The peak loading demand was calculated based on the methodology outlined in the *San Francisco Guidelines*. The proposed project would generate approximately 77 daily truck trips, which correspond to a demand for four spaces during average loading hours and 5 spaces during peak loading hours.

Impacts Not Further Evaluated

Due to the nature of the proposed project, there would be no impact related to the following significance criterion, and no impact discussion is provided for this topic for the stated reasons:

- ***Change in Air Traffic Patterns.*** The proposed project is not near an airfield; San Francisco International Airport is about 6 miles to the south, and Metropolitan Oakland International Airport is about 10 miles to the southeast. These distances are outside of the limit for objects near airports in the guidance published by the Federal Aviation Administration. Therefore, this criterion is not discussed further.

4.8.3 Impacts and Mitigation Measures

Proposed Project

Impact TR-1: Effects on Levels of Service

NEPA/CEQA: The proposed project would not cause levels of service at local intersections to substantially deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

As stated in Section 3.8, 12 study intersections were selected for analysis. The intersections chosen are expected to show greatest impact from project-generated traffic. Even though other intersections are not analyzed, they would be expected to operate similarly or better. The following 12 intersections were analyzed in terms of intersection LOS during the weekday a.m. peak period (4:00 p.m. to 6:00 p.m.). The locations of these intersections are presented in **Figure 4.8-1**.

- | | |
|---|---------------------------------------|
| 1. Sunnydale Avenue/ Persia Street | 7. Geneva Avenue/ Santos Street |
| 2. Sunnydale Avenue/ Sawyer Street | 8. Geneva Avenue/ Calgary Street |
| 3. Sunnydale Avenue/ Schwerin Street | 9. Geneva Avenue/ Schwerin Street |
| 4. Sunnydale Avenue/ Bayshore Boulevard | 10. Geneva Avenue/ Bayshore Boulevard |
| 5. Sunnydale Avenue/ Santos Street | 11. Visitacion Avenue/ Bayshore Blvd |
| 6. Geneva Avenue/ Brookdale Avenue | 12. Velasco Avenue/ Santos Street |

Figure 4.8-1
Project and Study Area Boundaries and Analyzed Intersection Locations

Table 4.8-1 shows that after implementation of the proposed project, the 12 study intersections would continue to operate acceptably (i.e., LOS D or better).

**TABLE 4.8-1
EXISTING AND EXISTING PLUS PROJECT
INTERSECTION LEVELS OF SERVICE (LOS) WEEKDAY P.M. PEAK HOUR**

Intersection	Control Type ^a	Existing Conditions		Existing plus Project	
		LOS ^a	Delay	LOS ^a	Delay
1. Sunnydale Avenue/ Persia Avenue	SSSC	B (NB)	13.2	C (NB)	16.5
2. Sunnydale Avenue/Sawyer Street	AWSC	A (EB)	8.2	B (WB)	10.9
3. Sunnydale Avenue/Schwerin Street	AWSC	A (WB)	9.9	B (WB)	14.7
4. Sunnydale Avenue/Bayshore Boulevard	Signalized	C	20.2	C	24.4
5. Sunnydale Avenue/Santos Street	AWSC	A (WB)	8.3	B (WB)	12.8
6. Geneva Avenue/Brookdale Avenue	SSSC	C (SB)	21.9	C (SB)	22.0
7. Geneva Avenue/Santos Street	Signalized	B	19.9	C	23.9
8. Geneva Avenue/Calgary Street	SSSC	C (SB)	22.3	D (SB)	30.4
9. Geneva Avenue/Schwerin Street	Signalized	B	16.6	B	15.9
10. Geneva Avenue/Bayshore Boulevard	Signalized	C	23.2	C	24.0
11. Visitacion Avenue/Bayshore Boulevard	Signalized	B	14.0	B	13.1
12. Velasco Avenue/Santos Street	AWSC	A (SB)	7.9	A (NB)	9.5

^a SSSC indicates a Side-Street Stop-Controlled intersection and AWSC indicates an All-Way Stop-Controlled intersection; for SSSC and AWSC intersections, LOS and delay is presented for the worst approach (i.e., the approach with the highest delay), indicated in parenthesis (i.e., NB = Northbound; SB = Southbound; EB = Eastbound; and WB = Westbound).

SOURCE: CHS Consulting Group, March 2013.

The impact would be *less than significant* under both NEPA and CEQA because the proposed project would not cause levels of service at local intersections to deteriorate from D or better to E or F, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system at those locations.

Mitigation: None required.

While the proposed project's traffic impacts would be less than significant, the City staff has identified improvement measures that may be adopted as conditions of project approval by City decision makers to facilitate traffic flow at the project site and vicinity. These improvement measures include adding left- and/or right-turn pockets at study intersections, which would improve LOS and vehicle delay, as well as working with the local waste hauler to minimize traffic disruption during collection.

Improvement Measures I-TR-A, I-TR-B, and I-TR-C.

Impact TR-2: Effects on Transit

NEPA/CEQA: The proposed project would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

The following discussion includes the proposed project's effect on existing transit operations along routes that serve the project site.

Bus Transit Operations

Delay impacts to transit were measured in terms of increases to transit travel times due to traffic congestion delay. Traffic congestion associated with the increases in area traffic slows down transit vehicles and may result in increased transit travel times. However, delays at specific locations along a transit route may not cause the route headway/frequency¹¹ to change or otherwise impact the operation of the entire route. For general analysis, potential transit travel delays were examined using traffic operations data obtained from the intersection LOS calculations performed at study intersections along the corridor and summing the average vehicular delay (for each approach) at each intersection along the transit line's route within the study area.

A project would potentially have a significant transit delay if it would generally increase travel time on a particular route by a length of time that would be greater than half of the route's existing headway (scheduled time between transit vehicles). If this were found, a more-detailed transit travel delay analysis would be undertaken for those routes.

With the proposed project, the following delays would occur on the following routes:

- **8X Bayshore Express** P.M. Southbound/Westbound delay would increase by 40.2 seconds, which is less than half of the route's 8-minute headway.
- **8X Bayshore Express** P.M. Northbound/Eastbound delay would increase by 52.5 seconds, which is less than half of the route's 8-minute headway.
- **8BX Bayshore "B" Express** P.M. Southbound/Westbound delay would increase by 40.2 seconds, which is less than half of the route's 8-minute headway. (The 8BX has no Northbound/Eastbound service during P.M. periods.)
- **9 San Bruno**, P.M. Southbound/Westbound delay would increase by 49.7 seconds, which is less than half of the route's 12-minute headway.
- **9 San Bruno**, P.M. Northbound/Eastbound delay would increase by 26.1 seconds, which is less than half of the route's 12-minute headway.

¹¹ Headway is the scheduled time between buses on a particular route.

- **56 Rutland**, P.M. delay would increase by 16.4 seconds, which is less than half of the route's 30-minute headway. (The route is circular, with no service in the opposite direction.)

Therefore, implementation of the proposed project would result in an increase in transit travel time, but that increase would be less than half of the route headway. Therefore, the project would result in a less-than-significant impact to existing bus transit operations.

Transit Capacity Analysis

Transit riders typically have multiple transit options to reach the project site and will choose a route based on several factors including reliability, headways, travel time, type of transit, comfort and convenience. Based on this understanding, four screenlines (i.e., Northeast, Northwest, Southeast, and Southwest) have been established to evaluate Muni operations into and out of the greater Downtown area, roughly corresponding to Superdistricts 1, 2, 3, and 4, respectively. Among the four screenlines, the majority of the project trips are expected to cross the Southeast screenline. The project would have a significant impact if the addition of project trips would exceed Muni's standard of 85 percent capacity utilization at Muni screenlines. All screenlines currently operate below Muni's 85 percent standard during the weekday a.m. and p.m. peak hours, with the southwest screenline being the most crowded.

The proposed project would generate about 3,749 net new daily transit trips and 562 net new p.m. peak-hour transit trips (of which approximately 366 trips would occur in the inbound direction and 196 trips would occur in the outbound direction based on the regional trip distribution pattern for the project area). These trips would be spread over different Muni bus lines as well as onto regional transit services with connections via local Muni bus lines.

The proposed project would add passengers to Routes 9, 8BX (which operates in place of the 8X in the peak direction during commute hours), and T Third. These added passengers would not substantially increase ridership at the four Muni screenlines, which would remain below 85 percent capacity utilization.

The increased passengers, however, would exceed the capacity utilization at locations other than the screenlines. For each route in the Muni system, SFMTA identifies the Maximum Load Points (MLP), which is the location where the passenger load is the greatest during the a.m. and p.m. peak commute hours. With the project, the increased passenger loads MLPs would exceed Muni's standard of 85 percent capacity utilization during the a.m. and p.m. peak hours. It is estimated that the project would add approximately 57 riders to the inbound Route 9 during the a.m. peak hour and to the outbound Route 9 during the p.m. peak hour, which constitute approximately 20 percent of the overall riders. The proposed project would add approximately 139 riders to the inbound Route 8BX during the a.m. peak hour and to the outbound Route 8BX during the p.m. peak hour, which constitute approximately 22 and 20 percent of the overall riders, respectively. The proposed project would also add approximately 15 riders to the inbound T Third during the a.m. peak hour and to the outbound T Third during the p.m. peak hour. These increases constitute approximately 2 percent of overall riders. With the addition of these project-generated transit trips, the service levels of these lines would worsen, as illustrated in the MLP exceedance of 85 percent utilization.

However, as stated above, transit impact significance is determined by the capacity utilization at the screenline. The addition of the riders generated by the proposed project to the four Muni screenlines would not substantially increase ridership, and the weekday peak-hour capacity utilization of the screenlines would be below 85 percent capacity utilization, as shown in **Table 4.8-2**. Therefore, the impact would be less than significant.

**TABLE 4.8-2
EXISTING PLUS PROJECT: MUNI SCREENLINE CAPACITY UTILIZATION DURING
WEEKDAY A.M. AND P.M. PEAK-HOURS**

Screenline	Added Trips	Total Ridership	Utilization
A.M. Peak-Hour¹			
Northeast	0	1,882	50%
Northwest	22	7,456	65%
Southeast	225	4,473	71%
Southwest	0	6,627	76%
Total	247	20,438	68%
P.M. Peak-Hour²			
Northeast	0	1,886	52%
Northwest	22	6,643	66%
Southeast	225	4,893	70%
Southwest	0	7,434	77%
Total	247	20,856	70%

¹ Toward downtown

² Away from downtown

SOURCE: CHS, 2013

Similar to Muni, the analysis of regional transit screenlines assesses the effect of project-generated transit-trips on transit conditions in the outbound direction during the weekday p.m. peak hour.

During the weekday p.m. peak hour there would be about seven transit trips destined to the East Bay, six transit trips to the North Bay, and eight transit trips to the South Bay. The addition of passengers generated by the proposed project would not have a substantial effect on the regional transit providers during the weekday p.m. peak hour because the capacity utilization for all regional transit providers would remain similar to those under existing conditions. As discussed in Section 3.8.3, *Existing Transit Network*, the East Bay screenline currently operates under BART's one-hour capacity utilization of 135 percent. Although the ridership demand over the East Bay screenline would exceed the regional transit operator's (except BART) 100-percent capacity, the project contribution to this corridor would be considered minimal (less than 0.04 percent).

Transit impacts would be *less than significant* under NEPA and CEQA because the proposed project would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, at applicable screenlines, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Mitigation: None required.

Impact TR-3: Effects on Pedestrians and Bicyclists

NEPA/CEQA: The proposed project would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Less than Significant)

As described under Project On-Site Improvements (page 4.8-7), the proposed project would realign the existing street network, relocate bus stops, and reconfigure existing lane configurations to accommodate additional bicycle facilities. The following discussion includes the proposed project's effects to pedestrian and bicycle safety and accessibility due to these proposed changes to the existing transportation network.

Pedestrian Impact Analysis

The proposed project would generate a total of 748 daily pedestrian trips, including 67 p.m. peak-hour pedestrian trips. There would be an additional 562 p.m. peak-hour walking trips to and from a transit stop. Under the proposed project, all streets would have sidewalks and crosswalks at all intersections, which would be considered an improvement from the existing conditions; therefore, pedestrians would be able to more safely navigate through the project site. The widths of sidewalks would range between 5 to 15 feet depending on the location. The eastern portion of Sunnydale Avenue near the community center would have the widest sidewalk at 15 feet in width, and sidewalks along the new north-south streets (i.e., "A", "B", "C", and "D" Streets) would be 5 feet wide, which would not meet the minimum 10-foot widths for residential streets in the *Better Streets Plan*. However, the conflict would not result in pedestrian impacts because the new north-south streets with 5-foot sidewalks would be two blocks long, and they would connect to streets with wider sidewalks. The estimated number of pedestrians who would use each of these north-south streets would be adequately accommodated on these sidewalks.

The new grid pattern would have corner bulb-outs (extension of a corner sidewalk at an intersection) and mid-block bulb-outs (extension of sidewalk in midblock into parking lane to reduce speeding). These design features would provide substantially better pedestrian connections and improve pedestrian safety. Sidewalks would be wheelchair accessible with curb-cuts at the intersections in compliance with the American Disability Act (ADA). Bulb-outs would be installed at all intersections to reduce pedestrian crossing distances and to improve pedestrian safety.

Currently there are few street trees and few lighting fixtures, and the proposed project would provide a more pedestrian-friendly street network with street lights and landscaping on every block. In addition, pedestrian-friendly community facilities would be provided throughout the project site such as the proposed pedestrian-only segment of Center Street between "C" and "D" Streets, a new neighborhood park for community gatherings and events, and a community garden. These improvements would be consistent with the City's Better Street Plan, which prioritizes walking and the use of streets as public spaces for social interaction and community life.

As discussed in Section 3.8.4, Existing Pedestrian Conditions, pedestrian traffic in the vicinity of John McLaren School is expected to remain low because school children would likely continue to be transported to school by their parents or school bus. In the event of increased student traffic in the area, potential pedestrian and vehicular conflicts would remain low due to improved pedestrian facilities such as wider sidewalks, “Green Streets,” which provide landscaped buffer between the pedestrian path and travel lanes, crosswalks, and corner bulb-outs.

Based on these findings, the proposed project would result in a *less-than-significant* impact on pedestrian conditions because it would not result in substantial overcrowding, create potentially hazardous conditions for pedestrians, or interfere with pedestrian accessibility to the site and adjoining areas.

Bicycle Impact Analysis

As shown in Figure 2-5 and explained in the Project Description, the proposed project would provide bicycle lanes on westbound Sunnydale Avenue west of Santos Street and along both sides of Santos Street, and the project would provide sharrows¹² along the remaining portions of Sunnydale Avenue and along Brookdale and Blythedale Avenues.

The width of westbound Sunnydale Avenue is 24 feet including a 7-foot-wide parking lane. Adding a 5-foot-wide bike lane in the westbound direction on Sunnydale Avenue would reduce the travel lane width from 17 to 12 feet; however, because it would not reduce the number of travel lanes, the proposed bike lane would not substantially increase traffic congestion or delays on Sunnydale Avenue. The curb-to-curb width of Santos Street is 46 feet including a 7-foot-wide parking lane on both sides of the street. Adding a 5-foot-wide bike lane on both sides of Santos Street would reduce the width of each of the two travel lanes from 16 to 11 feet; however, because it would not reduce the number of travel lanes, the proposed bike lane would not substantially increase traffic congestion or delays on Santos Street.

As discussed in Section 3.8.5, Existing Bicycle Conditions, currently there are no designated bicycle routes or lanes in the immediate vicinity of the proposed project, with the closest bicycle facilities being Route 90 on Geneva Avenue and Route 705 on Mansell Street. The proposed bike facilities would not connect to any surrounding bicycle network; however, they are expected to strengthen north-south and east-west bicycle traffic within the project site. Bicyclists traveling north on Santos Street and making a left at Sunnydale Avenue in the direction of McLaren Park would have a continuous north-south and east-west bike lane connection within the project site. Bicyclists traveling east on Sunnydale Avenue and making a right onto Santos Street would enter a bike lane immediately past the intersection of Sunnydale Avenue and Santos Street. Bicyclists traveling west on Sunnydale Avenue would travel on a 14-foot-wide travel lane with sharrows which would transition into a 12-foot travel lane and a 5-foot-wide bike lane past Santos Street.

¹² A sharrow is a street symbol that combines arrows and a bicycle and that indicates the path of travel for bicycles where no separate bicycle lane is provided.

The proposed project would generate approximately 42 new person trips using “Other” modes (i.e., other than driving, taking transit or walking) during the p.m. peak hour. The majority of these trips would likely be by bicycle. Because the existing bicycle volumes in the area were observed to be relatively low,¹³ the proposed bicycle facilities would be sufficient to accommodate any new bicycle trips in the area.

Potential Transit Conflicts with Proposed Bicycle Facilities

The proposed project would stripe 5-foot bike lanes on westbound Sunnydale Avenue west of Santos Street, and in both directions on Santos Street between Sunnydale Avenue and Velasco Avenue. Muni bus route 9 runs along Sunnydale Avenue and Santos Street with approximately five buses per hour during the a.m. and p.m. peak periods, and Muni bus routes 8X and 8BX run along Santos Street with approximately eight buses per hour during the a.m. and p.m. peak periods. The installation of the proposed bike lanes would not affect roadway capacity and buses would continue to operate on 11- to 12-foot-wide travel lanes. Because bicycles and transit would each have their own lanes, potential conflicts between bicyclists and buses would be minimal.

The proposed project would add sharrows on the remaining segments of Sunnydale Avenue and both sides of Blythedale Avenue and Brookdale Avenue within the project site. There are no Muni bus routes operating on Blythedale Avenue or Brookdale Avenue, and therefore no conflicts between bicycles and buses are anticipated along these streets. Eastbound Sunnydale Avenue between the western project border and Santos Street would have an 11-foot-wide travel lane with a sharrow, and Sunnydale Avenue east of Santos Street would have 14-foot-wide travel lanes with sharrows in both directions. The sharrows could potentially affect transit operation because buses traveling behind a bicyclist may experience somewhat slower speeds (although this would be less likely to be an issue on eastbound Sunnydale Avenue, which slopes downhill). However, bicycle volumes are, and would be, generally low, in part because of the hilly terrain; therefore, potential conflicts between bicyclists and buses, as well as any potential transit delay, would be minimal.

Four bus stop locations (i.e., on westbound Sunnydale Avenue west of Santos Street and on both sides of Santos Street) could be potentially affected by the proposed bike lanes. As shown in Figure 2-5, westbound Sunnydale Avenue (west of Santos Street) would have a 12-foot travel lane, a 5-foot bike lane, and a 5-foot parking lane. Santos Street would have an 11-foot travel lane, a 5-foot bike lane, and a 5-foot parking lane. At the bus stop locations, the parking lanes would be replaced with bulb-outs, and potential conflicts between buses and bikes may occur because buses would have to cross the bike lane to pull to the curbside stop or to re-enter the travel lane. In this case, buses typically give a right-of-way to the cyclists so that the bus can safely maneuver between the stop and the travel lane. Both buses and bicyclists would have sufficient right-of-ways to travel comfortably alongside each other. Bicycle volumes are generally low; therefore, interactions and potential for conflicts between bicyclists and buses would be minimal.

¹³ Field visits were conducted on Sunday, August 29, 2010, and on Thursday, September 23, 2010.

Bicycle and Pedestrian Conflicts with Other Modes

Parking. As shown in Figures 2-1 and 2-5, the proposed street layout would include perpendicular parking on Center Street between “A” Street and Hahn Street, and parallel parking on the rest of the streets in the project site. The perpendicular parking lanes on Center Street would be up to 16.5 feet from the curb, and the parallel parking lanes would be 7 feet from the curb. The proposed 5-foot-wide bike lanes on the north side of Sunnydale Avenue and on both sides of Santos Street would run parallel to these parking lanes. Sharrows on the south side of Sunnydale Avenue east of Santos Street would be stenciled on the approximately 14.5-foot-wide roadway pavement, and this would be sufficient to accommodate each mode of travel. The sharrows on Brookdale and Blythedale Avenues would be stenciled on the approximately 11 feet wide roadway pavement. Because bike volumes on the project site would be relatively low (with fewer than 42 net new trips during the p.m. peak hour), no substantial vehicular and bike conflicts would be expected. The portion of Sunnydale Avenue and Center Street where angled parking is provided is flat with approximately 2 to 5 percent grade; therefore, no substantial bicycle conflict is expected. No parking would be lost due to installation of bike lanes or sharrows on the street because parking lanes would be maintained adjacent to each travel lane or bike lane.

Transit. Sunnydale Avenue and Santos Street in the project site would have both transit and bicycle traffic. Sunnydale Avenue west of Santos Street has Muni bus route 9 operating at 12-minute headways (five buses an hour). This portion of Sunnydale Avenue would have a 12-foot-wide travel lane and a 5-foot-wide bike lane in the westbound direction and sharrows on the 12-foot-wide travel lane on the eastbound direction. Sunnydale Avenue east of Santos Street has Muni bus routes 8X and 8BX each operating at 8-minute headways (15 buses an hour). This portion of Sunnydale Avenue would have sharrows on the 14-foot-6-inch-wide travel lane in both directions. Santos Street has Muni bus routes 9, 8X, and 8BX operating at a combined frequency of every 3 minutes (20 buses an hour). Santos Street would have an 11-foot-wide travel lane and a 5-foot-wide bike lane in each direction. Bike volumes would be relatively low in the area, and Sunnydale Avenue and Santos Street would have sufficient widths to accommodate both transit and bike traffic; therefore, conflicts between the two modes would be minimal.

Loading. The proposed project consists of mostly residential buildings, a mixed-use building and a community building. Loading demand would be relatively low and would take place within the off-street loading dock or on-street parking and/or loading spaces. There would be designated on-street loading spaces in front of the main entrance to buildings (approximately one per block).¹⁴ Because there would be a sufficient number of loading spaces provided within the project site, no conflicts are expected with pedestrian or bike activities on the street. The off-street loading dock would be located adjacent to the mixed-use senior housing building in Block 3, and the loading dock access would be made from Center Street, near Hahn Street. Potential conflict points would exist at the loading dock entry and exit off Center Street. However, trucks backing into the loading dock would generally be expected to move slowly while making this movement,

¹⁴ These spaces would be designated as white or yellow loading zones during the midday period, and they can be used as on-street parking spaces during the evening period.

so that the trucks are highly visible to bicyclists and pedestrians. Therefore, there would be no substantial hazard to bicyclists or pedestrians.

Given all of the above, the proposed project would result in a *less-than-significant* impact under NEPA and CEQA because it would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Mitigation: None required.

Impact TR-4: Loading Effects

NEPA/CEQA: The proposed project would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

The analysis of loading impacts of the proposed project includes a comparison of proposed loading space supply to the *Planning Code* requirements and the estimated loading demand during the peak hour of loading activities. Loading requirements for the project were calculated based on the San Francisco *Planning Code* Section 152. As described in Chapter 2, Project Alternatives/Project Description, the residential component of the proposed project would be developed over 2,185,000 gsf of building space spread over 33 detached buildings. Buildings larger than 100,000 gsf would require one off-street loading space for each block. In addition, the 16,000 gsf retail component of the proposed project would require one off-street loading space. In sum, a total of three off-street loading spaces would be required. As stated in Chapter 1, the project would require an SUD that would enable modifications from the requirements of the *Planning Code* to allow for more flexibility in the placement of rear yards, setbacks, location and number of parking and loading spaces, among other standards.

Loading Supply

The proposed project would provide one off-street loading space as part of the mixed-use senior building. As a result, the proposed project would be deficient by two off-street loading spaces. The project sponsor would seek exceptions from the off-street loading space requirement for the larger residential buildings and retail use through an application for a rezoning that would create an SUD.

In addition to the off-street loading space, the project would provide on-street loading spaces throughout the project site. The exact location of on-street loading zones would be determined based on the actual demand and needs for the project site in the future with collaboration with the SFMTA. It is expected that the move-in and move-out activities for residential uses would occur within the garages or from a nearby loading zone on the street.

Loading Demand

As stated in Chapter 1, the project would require an SUD that would enable modifications from the requirements of the *Planning Code* to allow for more flexibility in the placement of rear yards, setbacks, location and number of parking and loading spaces, among other standards.

The proposed project would generate 77 daily truck trips, which equals a demand for four loading spaces for the average hour and five spaces for the peak loading hour. Because the project would provide one off-street loading space, the remaining loading activities would need to be accommodated on the on-street loading spaces.

Passenger Loading Activities

Passenger loading and unloading activities are anticipated to occur near the main entrance to buildings throughout the project area. The project sponsor would be required to petition the SFMTA to designate parts of street frontages as white (passenger) loading zones in front of the main entrance to each building.

Trash and Recycling Storage and Collection

The current project plans do not include building-specific design information. It is anticipated that each multi-family residential building would include a centralized area for collection of trash, recycling, and composting bins on the ground floor or outside the building at grade, and these bins would be rolled in and out for each pick-up through the proposed parking entry curb-cuts. Likewise, the recreation and community center, and the senior housing building would each have a ground-floor room for trash, recycling, and composting bins. The ground-floor retail space in the senior housing building would likely have a separate trash room. The City's Green Building Ordinance, Section 1304C.0.4, requires that "areas provided for recycling, composting and trash storage, collection and loading, including any chute systems, must be designed for equal convenience for all users to separate those three material streams, and must provide space to accommodate a sufficient quantity and type of containers to be compatible with current methods of collection."

As master planning proceeds to the schematic design stage for the proposed buildings, the project sponsor intends to work with Recology, the City's trash, recycling, and compost hauler, and with the San Francisco Department of the Environment and SFMTA's Sustainable Streets Division to ensure that trash, recycling, and composting facilities are stored in accessible locations for pick-up, remain on the street for the shortest time possible before and after pick-up, and to minimize pedestrian and other traffic disruption during collection.

In summary, the project loading demand would be sufficiently accommodated through the combination of the designated off-street loading space and on-street loading zones to be provided throughout the project site. Because the proposed project would have sufficient loading spaces on the project site and its trash collection would not interfere with pedestrian and other traffic, the project would result in a *less-than-significant* impact on loading conditions under NEPA and CEQA.

Mitigation: None required.

While the proposed project's loading impacts would be less than significant, the following improvement measure may be adopted as conditions of project approval by City decision makers to facilitate loading. It would require the project sponsor to work with Recology, and with the San Francisco Department of the Environment and the SFMTA's Sustainable Streets Division to ensure that trash, recycling, and composting facilities are designed to ensure maximum diversion of trash and minimize traffic disruption during collection.

Improvement Measure I-TR-D.

Impact TR-5: Effects on Emergency Access

NEPA/CEQA: The proposed project would not result in inadequate emergency access. (Less than Significant)

With the implementation of the proposed project, access to the project site would not be substantially different from the existing conditions. Emergency vehicles would continue to use major access roads, such as Sunnydale Avenue, Santos Street, Brookdale Avenue, or Blythedale Avenue to access the project site.

As discussed, the project would reconfigure parts of Sunnydale Avenue, Brookdale Avenue, Blythedale Avenue and Santos Street, and would add new streets and driveways in between residential buildings within the site. All streets are proposed as public streets, and they would be required to adhere to the *San Francisco Fire Code*. Per *Fire Code* Section D105.1, all buildings exceeding 30 feet in height must provide 26 feet of clear roadway width for aerial fire apparatus access, with an exception of residential buildings equipped with automatic sprinkler systems. In addition, access must be from a minimum 15 feet and maximum 30 feet distance from roadway to building.

Under the proposed roadway schemes, the roadway widths would range between 34 to 43 feet curb-to-curb, or from 20 to 29 feet bulb-to-bulb. The San Francisco Fire Department indicated that the proposed roadway widths would meet the standards because all residential buildings would be equipped with full sprinklers.¹⁵ In terms of building access, all buildings would have adequate access for emergency vehicles. While the specific dimensions of streets or driveways are not finalized, the project sponsor would ensure that all developments are designed in accordance with the City standards to provide adequate emergency access.

Based on these findings, the proposed project would not result in inadequate emergency access and the adverse effects to emergency access would be *less than significant* under NEPA and CEQA.

Mitigation: None required.

¹⁵ San Francisco Fire Department, Personal Communication from Fire Marshal Barbara Schultheis to Steve Ronzone, project representative, November 22, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Construction Impacts

Impact TR-6: Construction Effects

While construction impacts are normally considered less than significant due to their typically limited duration, in the case of the proposed project, construction would extend over three phases and a number of years. Accordingly, construction effects are evaluated here in the operational context and intensity evaluation guidelines and criteria of significance.

NEPA/CEQA: Construction under the proposed project would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant with Mitigation)

Construction Activities

The details of the construction plan have not yet been finalized, but it is anticipated that the site would be divided into three phases. The first phase (Phase I) would demolish 316 existing dwelling units and construct 521 new units and the community support services in the eastern portion of the project site (i.e., Blocks 1 through 9). Eastern portions of Sunnydale Avenue and Blythedale Avenue, and Santos Street would be reconfigured during this first phase, and new "A" Street and the portion of Center Street connecting "A" Street to Hahn Street would be constructed. Phase II would continue the reconfiguration of Sunnydale Avenue west and introduce the northern portions of the new north-south streets, "B," "C," and "D" Streets, and the remainder of Center Street. During this phase, 279 existing dwelling units would be demolished and 625 new units would be developed in the northwestern portion of the project site (i.e., Blocks 10 through 21). Phase III would connect the new north-south streets to Blythedale Avenue. During this phase, 191 existing dwelling units would be demolished and 554 new dwelling units would be constructed in the southwest portion of the project site (i.e., Blocks 22 through 36).

During each phase, the existing buildings, streets, and utilities would be demolished first, and rough grading of the streets, building pads and open space would occur. The construction of new underground utility infrastructure with appropriate tie-ins to existing utilities (e.g., neighborhood power transformers, and sanitary sewer boxes) would follow, and then buildings would be constructed as determined by the financing available as well as the best scenarios for facilitating equipment and material access to the building sites.

It is estimated that each phase of construction would last between 3 to 5 years for a total of 9 to 15 years in duration for the entire project. As such, when Phase I is under construction, existing buildings in Phase II and III areas would continue its current occupancy. There would be no more than one phase under demolition or construction at any given time.

During each phase of the construction, the residents living in the respective construction phase would be either relocated to vacant units or be provided relocation assistance for off-site relocation. The project sponsor would work with the residents and neighbors, SFMTA, Department of Public Works and other utility agencies and the City departments to develop an access plan for pedestrians and transit during each phase of construction.

The discussion below presents the preliminary plans for site access during construction, as well as potential impacts to site access, traffic, transit, and pedestrians. However, the details of the site access plan have not been fully developed. To ensure that impacts would be reduced to less-than-significant-with-mitigation, **Mitigation Measure M-TR-6** has been identified.

Site Access During Construction

It is expected that the project construction would involve temporary street closures for 15 to 18 months in each phase for the site demolition, re-grading, and utility infrastructure construction. These access limitations would constitute a significant impact.

To address these concerns, the project sponsor intends to provide notification of street closures and detour directions in advance to all affected residents and users, including teachers and parents of McLaren Early Education School. During Phase I, the eastern portions of Sunnydale and Blythedale Avenues and Santos Street between Sunnydale and Velasco Avenues would be realigned to form a rectilinear grid pattern at the intersections of Sunnydale Avenue/Santos Street and Santos Street/Blythedale Avenue. During this period, these sections of Sunnydale Avenue, Blythedale Avenue and Santos Street would be closed to all traffic except for construction vehicles. Residents living west of Santos Street along Sunnydale Avenue and students, teachers, and parents going to McLaren Early Education School would access their buildings via McLaren Park from the west of the project site potentially using Mansell Street and Sunnydale Avenue. This detour would increase travel distance by up to 0.5 miles. Residents living west of Santos Street on Brookdale Avenue or Blythedale Avenue would access the project site via Geneva Avenue and Brookdale Avenue. Transit access to the project site and McLaren Early Education School would be provided at a temporary bus stop/turnaround point at the intersection of Brookdale Avenue and Santos Street (immediately west of the Phase I construction area). The project sponsor intends to maintain a connection on west Sunnydale Avenue to ensure access to McLaren Early Education School and affected residential buildings during the construction period.

Mansell Street and Sunnydale Avenue roadways have one lane in each direction and currently carry 100 to 300 vehicles per hour during the p.m. peak hour. The detour traffic would add approximately 195 vehicle trips to these roadways during the p.m. peak hour.¹⁶ While the volume increases on these roadways would be noticeable, the overall traffic volumes would remain at levels less than the carrying capacity of the local roadways, which is approximately 800 vehicles per lane per hour.

During Phase II, Sunnydale Avenue west of Santos Street would be straightened and parts of Brookdale Avenue would be reconfigured to connect to Sunnydale Avenue in the north. In addition, three new streets would be constructed in the north-south direction to connect the newly straightened Brookdale Avenue to Sunnydale Avenue. During this period, the segment of Sunnydale Avenue between the western project border and Santos Street would be closed to all

¹⁶ The number of vehicle trips generated by residents living west of Santos Street along Sunnydale Avenue (part of Phase II area) are conservatively estimated assuming one third of total existing person trips (1,322 person trips) is multiplied by 53 percent auto mode split and divided by 1.2 persons per vehicle occupancy.

traffic except for construction vehicles for approximately 15 to 18 months. As a result, traffic from the west of the project site (approximately 42 vehicle trips during the p.m. peak hour) would be blocked off and would need to be rerouted to Moscow Street, Geneva Avenue and Brookdale Avenue or via Mansell Street, Visitacion Avenue and Sunnydale Avenue to access the project site. Students, parents and teachers going to McLaren Early Education School would also need to be rerouted to Mansell Street and Sunnydale Avenue to access the school. The sponsor intends to coordinate with SFMTA to ensure that transit access to the project site and McLaren Early Education School would be provided at a temporary bus stop / turnaround point at the intersection of Brookdale Avenue and Santos Street (immediately west of the Phase I construction area). As stated previously, the project sponsor would work with the SFMTA and DPW to maintain appropriate connections so that affected residents and school traffic are facilitated at all times.

In addition, McLaren Park would not be accessible from Sunnydale Avenue during Phases I and II, and drivers would need to be diverted to the north side of the park through the Excelsior neighborhood or south side via Geneva Avenue. The other traffic using Sunnydale Avenue, Santos Street or Brookdale Avenue would not be affected during Phase II. A parking lot located south of Brookdale Avenue would not be accessible. Residents who park in this lot (approximately 34 spaces) would need to park on the streets or in other parking lots in the Phase III area where available.¹⁷

Phase III construction would straighten the remaining portion of Brookdale Avenue and the western half of Blythedale Avenue. The three new north-south streets constructed in Phase II would extend into the Phase III area to complete the connection between Sunnydale Avenue and Blythedale Avenue. During this phase traffic from Geneva Avenue via Brookdale Avenue would not be accessible; however, Sunnydale Avenue and Santos Street would be open, and access to McLaren Park or McLaren Early Education School would not be affected. Residents in the Phase I and II areas would continue to access the project site via Sunnydale Avenue or Santos Street.

During each phase of the construction, fencing, grading, and street closures would be planned to maintain access to the existing occupied units at all times, and temporary pedestrian walkways would be provided in order to facilitate pedestrian movements within the project site. In the event of an emergency, emergency vehicles would be able to access the existing occupied units at all times using the temporary streets or detour routes. John McLaren School would also remain accessible in the event of an emergency via Sunnydale Avenue west, Mansell Street/Persia Avenue, and Moscow Street. The project sponsor intends to work with the residents, neighbors, SFMTA, DPW, San Francisco Fire Department (SFFD), San Francisco Police Department (SFPD), utility agencies and City departments to develop an access plan for pedestrians and transit during these phases of construction. As a result, site access during construction activities would be maintained and because the project sponsor would coordinate with the affected community and public agencies, as appropriate, impacts to site access would be less than significant.

¹⁷ The existing parking lots in the project site are not designated, and they are open to all residents depending on availability.

Construction Traffic

Construction activity would typically occur Mondays through Saturdays, between 7:00 a.m. and 8:00 p.m., and the typical work shift for most construction workers would be from 7:00 a.m. to approximately 3:30 p.m. Construction is not anticipated to typically occur on Sundays or major holidays. It is anticipated that there would be construction truck traffic to off-haul soil from the project site that results from the re-grading activities.

As stated in the Project Description, the project would require about 221,000 cubic yards of soil to be hauled off the site. Up to 10 daily truck trips would occur.¹⁸ In addition, construction vehicle and worker trips would be generated. The transport of oversize or overweight loads on Route 101 or other state highways would require approval from Caltrans. The most intense construction activities would occur during Phase II when 625 new dwelling units along with three new streets (i.e., "B", "C", and "D" Streets) would be constructed.

While the construction details have not been fully developed, the number of truck trips and worker trips generated during the construction period is expected to be considerably less than the amount of new vehicle traffic generated by the proposed project at completion (approximately 621 vehicle trips during the p.m. peak hour). Given the size of the project site, and its own internal street network and planned future open spaces, construction staging and worker parking would be contained within the project site and would not occupy spaces on neighborhood streets. Construction traffic would be routed along Geneva Avenue, Brookdale Avenue and Santos Street and would be managed to avoid peak periods to lessen impacts on peak-hour traffic and transit operations on Santos Street. Based on these findings, construction-related traffic associated with the proposed project would be less than significant, and no mitigation measures would be required.

Transit Impacts During Construction

The project sponsor has been working with SFMTA to develop a rerouting and bus stop plan to mitigate potential impacts on transit operations in the project site. While the Phase I area is under construction, portions of Sunnydale Avenue, Blythedale Avenue and Santos Street would be closed to all traffic except for construction vehicles. Therefore, Muni routes 8X, 8BX and 9 that run on Santos Street and Sunnydale Avenue would need to be rerouted by SFMTA. For example, Route 9, which currently runs on Sunnydale Avenue, Schwerin Street, Geneva Avenue and Santos Street in the project site could potentially run on Sunnydale Avenue, Calgary/Sawyer Street, Geneva Avenue and Brookdale Avenue during Phase I. The bus stop at the intersection of Velasco Avenue and Santos Street would need to be relocated to the intersection of Geneva Avenue and Santos Street. The existing route terminus--which is located on Sunnydale Avenue in front of McLaren School--would also be relocated, possibly to the intersection of Brookdale Avenue and Santos Street (immediately west of the Phase I construction area). The project

¹⁸ ENVIRON International Corporation, *Air Quality and Health Risk Assessment: Sunnydale Velasco HOPE Project, San Francisco, California*, Appendix B-3, June 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

sponsor would provide the bus layover area at this intersection.¹⁹ Routes 8X and 8BX--which currently run on Sunnydale Avenue and Santos Street through the project site--could be potentially rerouted to Visitacion Avenue, Calgary/Sawyer Street, Geneva Avenue, and Brookdale Avenue.

During Phase II of construction, Muni routes 9, 8X, and 8BX would be restored to run on Santos Street and the eastern half of Sunnydale Avenue. However, the existing terminus for Route 9 would not be accessible, thus it would need to be relocated to the intersection of Sunnydale Avenue and Santos Street during this phase. During Phase III of construction, all Muni routes (i.e., 9, 8X and 8BX) would be restored to their current configurations along Santos Street and the entire length of Sunnydale Avenue.

In order to minimize potential transit impacts, the project sponsor intends to continue to work with SFMTA to develop a transit service rerouting plan and a temporary bus stop relocation plan. As such, adverse effects to existing transit service in and around the project site during project construction would be reduced to a less-than-significant level through appropriate coordination between the project sponsor and SFMTA, and impacts to existing transit service would be less than significant.

Pedestrian Impacts During Construction

During each phase of the construction, fencing, grading, and street closures would be planned to maintain access to the existing occupied units at all times, and temporary pedestrian walkways would be provided in order to facilitate pedestrian movements within the project site. Construction sites would be fenced off and pedestrian access outside of the project site (e.g., along Hahn Street and Velasco Street) would not be affected during the construction period.

In general, bus rerouting and stop relocation plans as a part of construction activity are subject to review and approval by SFMTA. To minimize the construction-related impacts, the project sponsor would be required to develop a construction traffic management plan for approval by the Traffic Engineering and Muni Planning Divisions of the SFMTA, SFPD, SFFD, DPW, and the San Francisco Unified School District (SFUSD) prior to initiation of construction. The coordinated plan should include measures that address, but not be limited to, construction activities in each phase, truck arrivals and departures, lane closures and detours, and staging and ensure that all modes of travel, including bike and pedestrian trips are accommodated.

Conclusion

The discussion above presents the preliminary plans for site access during construction, as well as potential impacts to site access, traffic, transit, and pedestrians. However, the details of the site access plan have not been fully developed because project planning has not proceeded to the point that a detailed construction traffic control plan can be prepared. Due to the duration of roadway closures, construction activities, and blocked access to McLaren Park with limited alternatives for up to 15 to 18 months, such activities could result in significant impacts to

¹⁹ The relocation site for the route 9 terminus has not been determined yet. The intersection of Brookdale Avenue and Santos Street is currently being considered as a potential relocation site.

pedestrian access and safety. However, implementation of **Mitigation Measure M-TR-6** would reduce potential construction impacts to a less-than-significant level by requiring preparation and implementation of a traffic control plan during construction, in coordination with local agencies. The plan would include measures to address street closures and ensure safe access.

The impact would be *less-than-significant with mitigation* under NEPA and CEQA because, while construction under the proposed project could potentially result in intermittent degradation of intersection levels of service, result in delays to transit, interfere with pedestrian and bicycle accessibility to the site and adjoining areas, and/or disrupt emergency access, the impact would be reduced to a less-than-significant level with implementation of identified mitigation.

Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.

Parking Information

As discussed in Section 4.1 of this document, *Public Resources Code* Section 21099(d), effective January 1, 2014, provides that, “aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment.”²⁰ As discussed in Section 4.1, the proposed project meets each of the three criteria. Thus, this document does not consider adequacy of parking in determining the significance of project impacts.

However, the Planning Department and MOHCD acknowledge that parking conditions may be of interest to the public and the decision makers. Therefore, a parking demand analysis is presented for informational purposes and considers secondary physical impacts associated with constrained supply (e.g., queuing by drivers waiting for scarce onsite parking spaces that affects the public right-of-way) as applicable in the transportation analysis.

Currently, there are 430 off-street and 452 on-street parking spaces on the project site. The proposed project would provide 1,437 off-street and 500 on-street parking spaces, resulting in a net increase of 1,007 off-street and 48 on-street parking spaces relative to existing conditions. All 1,437 off-street parking spaces would be dedicated for the residential use, and no spaces would be provided for the retail and recreation/community center uses because their parking demand would be accommodated on the street. The off-street residential parking spaces would be distributed at approximately one space per market rate housing unit, 0.6 spaces per affordable housing unit, and 0.3 spaces per senior housing unit, for an average of 0.8 spaces per housing unit.

The peak parking demand analysis was performed for each land use based on the rates and the methodology outlined in the *San Francisco Guidelines*. Long-term parking demand generally consists of resident and employee parking, while short-term parking demand is associated with visitor and patron parking. The proposed project would generate a total parking demand of

²⁰ See Public Resources Code Section 21099(d).

about 1,810 spaces (1,699 long-term and 111 short-term parking spaces). A comparison of supply versus demand indicates there would be a surplus of approximately 127 on-street parking spaces, and the proposed project would provide an adequate supply of parking to accommodate anticipated demand. Additionally, the project site is served by public transit and bicycle facilities. Therefore, the project would not result in a substantial parking deficit and would not materially affect the overall parking conditions in the project vicinity such that hazardous conditions or significant delays are created.

Based on the *Planning Code* for the RM-1 District, the proposed project would be required to provide a minimum of 694 off-street parking spaces for the residential use, 39 off-street parking spaces for the retail use, and 156 off-street parking spaces for the recreation and community center use for a total of 889 spaces. As a result, the proposed project would exceed the minimum requirements for the residential use; however, the project would not meet the minimum requirements for the retail and recreation/community center uses. The project sponsor would apply for a rezoning that would create an SUD to allow the retail and recreation / community center's parking demand to be met on the street.

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. While parking conditions change over time, a substantial deficit in parking caused by a project that creates hazardous conditions or significant delays to traffic, transit, bicycles or pedestrians could adversely affect the physical environment. Whether a deficit in parking creates such conditions will depend on the magnitude of the shortfall and the ability of drivers to change travel patterns or switch to other travel modes. If a substantial deficit in parking caused by a project creates hazardous conditions or significant delays in travel, such a condition could also result in secondary physical environmental impacts (e.g., air quality or noise impacts caused by congestion), depending on the project and its setting.

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 or other modes (walking and biking), would be in keeping with the City's "Transit First" policy and numerous *San Francisco General Plan Policies*, including those in the Transportation Element. The City's Transit First Policy, established in the City's Charter Article 8A, Section 8A.115, provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars 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. 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 thus choose to reach their destination by other modes (i.e.,

walking, biking, transit, taxi). If this occurs, 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, would reasonably address potential secondary effects.

In summary, the proposed project would not result in a substantial parking deficit that would create hazardous conditions or significant delays affecting traffic, transit, bicycles or pedestrians.

Proposed Project Variant

The project variant would generate approximately eight fewer daily person trips and one fewer p.m. peak-hour person trip than the proposed project. Similarly, the project variant would have the same number of net new person trips for each mode and net new vehicle trips as the proposed project, as well as distribute and assign these trips as described for the proposed project. As a result, the project variant would result in the same LOS at each study intersection for the proposed project (see Table 4.8-1) and therefore, project variant-related impacts at the study intersections would be *less than significant* under both CEQA and NEPA.

Given the project variant would be similar to the proposed project, with the only difference between the proposed project and the variant being a different residential unit mix within the project site and associated parking spaces, all environmental effects as described above for the proposed project would apply to the variant. Furthermore, all other project elements, including the type and location of land uses, number and location of proposed internal blocks, new on-site transportation improvements (i.e., new roadways and pedestrian connections), and other proposed circulation system modifications within the project site would remain the same as described for the proposed project. Therefore, under both CEQA and NEPA implementation of the proposed project variant would result in a *less-than-significant* impact on transit, bicycle, and pedestrian conditions as well as a *less-than-significant* impact on loading conditions and emergency access, and would not create any traffic safety hazards. **Improvement Measures I-TR-A, I-TR-B, I-TR-C, and I-TR-D** would also apply to the project variant.

However, because construction of the project variant would be the same as described as that for the proposed project (see Impact Statement TR-6), the project variant could result in adverse effects to pedestrian access and safety. Implementation of **Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan** would reduce impacts to traffic and transit circulation, site access, pedestrian access and safety, and emergency access to *less-than-significant-with-mitigation* under both CEQA and NEPA.

Parking Information

The same approach used to analyze parking conditions with implementation of the proposed project (as described above) was applied to the project variant.

Parking Requirements

Based on the *Planning Code* for the RM-1 District, the project variant would be required to provide a minimum of 632 off-street parking spaces for the residential use, 39 off-street parking

spaces for the retail use, and 156 off-street parking spaces for the recreation and community center use for a total of 827 spaces. The variant would exceed the minimum requirements for the residential use; however, it would not meet the minimum requirements for the retail and recreation/community center uses. As stated in Chapter 1, the project would require an SUD that would enable modifications from the requirements of the *Planning Code* to allow for more flexibility in the location and number of parking and loading spaces, among other standards.

Parking Supply and Demand

Currently, there are 430 off-street and 452 on-street parking spaces on the project site. The proposed project variant would provide 1,378 off-street and 500 on-street parking spaces, resulting in a net increase of 948 off-street and 48 on-street parking spaces from the existing conditions. Similar to the proposed project, all 1,378 off-street parking spaces would be dedicated for the residential use and none would be provided for the retail or community uses. The off-street residential parking spaces would be distributed at the same ratio as the proposed project (i.e., one space per unit for market rate housing, 0.6 spaces per unit for affordable housing, and 0.3 spaces per unit for senior housing).

The variant would generate a demand for approximately 1,814 parking spaces, while there would be 1,378 structured parking and 500 on-street parking spaces. As a result, there would be a surplus of approximately 64 parking spaces and therefore, the variant would not result in a substantial parking deficit that would create hazardous conditions or significant delays affecting traffic, transit, bicycles or pedestrians.

Alternative A: Reduced Development / Density Alternative

Travel Demand Analysis

Trip Generation. The Reduced Development/Density Alternative would construct 1,372 dwelling units, 16,200 gsf of retail space, and 72,500 gsf of recreation/community center. The total number of dwelling units on the project site would increase from 785 to 1,372. Based on ITE trip rates, it is estimated that this alternative would generate a total of 16,434 daily person trips and 2,340 p.m. peak-hour person trips, which would represent approximately 8,181 net new daily person trips and approximately 1,018 net new p.m. peak-hour person trips. As a result, net new daily person trips and p.m. peak-hour person trips would be reduced by 2,733 and 465, respectively, compared to the proposed project.

Mode Split. The Reduced Development/Density Alternative would generate approximately 4,639 auto person trips, 2,556 transit trips, 728 walk trips, and 258 bike or walking trips on a typical day. During the p.m. peak hour, the alternative would generate 566 auto person trips, 360 transit trips, 63 walking trips, and 29 other mode trips. Furthermore, this alternative would generate approximately 3,183 daily vehicle trips and 415 p.m. peak-hour vehicle trips, which is 1,242 fewer daily vehicle trips and 206 fewer p.m. peak-hour vehicle trips in comparison to the proposed project. Approximately 257 trips (62 percent) would occur in the inbound direction (into the

project site), and 158 trips (38 percent) would occur in the outbound direction (away from the project site) during the p.m. peak hour.

Trip Distribution. The project-generated person trips under the Reduced Development/Density Alternative would be distributed and assigned as described for the proposed project.

Loading Demand Analysis. The peak loading demand was calculated based on the methodology outlined in the *San Francisco Guidelines*. The Reduced Development/Density Alternative would generate approximately 53 daily truck trips (24 fewer trips than the proposed project), which correspond to a demand for two spaces during the average loading hour and three spaces during the peak loading hour.

Impact A-TR-1: Effects on Levels of Service

NEPA/CEQA: The Reduced Development/Density Alternative would not cause levels of service at local intersections to substantially deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

Table 4.8-3 shows that the 12 study intersections would continue to operate acceptably with implementation of the Reduced Development / Density Alternative, and trips to these intersections related to this alternative would not deteriorate their existing operating conditions to unacceptable levels.

The impact would be *less than significant* under both NEPA and CEQA because the alternative would not cause levels of service at local intersections to deteriorate from D or better to E or F, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system at those locations.

Mitigation: None required.

While the alternative's traffic impacts would be less than significant, the City staff has identified improvement measures that may be adopted as conditions of approval by City decision makers to facilitate traffic flow at the project site and vicinity. These improvement measures would include adding left- and/or right-turn pockets at study intersections, which would improve LOS and vehicle delay, as well as working with the local waste hauler to minimize traffic disruption during collection.

Improvement Measures I-TR-A, I-TR-B, and I-TR-C.

**TABLE 4.8-3
EXISTING AND EXISTING PLUS REDUCED DEVELOPMENT/DENSITY ALTERNATIVE
INTERSECTION LEVELS OF SERVICE (LOS) WEEKDAY P.M. PEAK HOUR**

Intersection	Control Type ^a	Existing Conditions		Existing plus Reduced Development/ Density Alternative	
		LOS ^a	Delay	LOS ^a	Delay
1. Sunnydale Avenue/ Persia Avenue	SSSC	B (NB)	13.2	C (NB)	15.3
2. Sunnydale Avenue/Sawyer Street	AWSC	A (EB)	8.2	B (WB)	9.7
3. Sunnydale Avenue/Schwerin Street	AWSC	A (WB)	9.9	B (WB)	12.5
4. Sunnydale Avenue/Bayshore Boulevard	Signalized	C	20.2	C	23.0
5. Sunnydale Avenue/Santos Street	AWSC	A (WB)	8.3	B (WB)	10.6
6. Geneva Avenue/Brookdale Avenue	SSSC	C (SB)	21.9	C (SB)	21.9
7. Geneva Avenue/Santos Street	Signalized	B	19.9	C	22.6
8. Geneva Avenue/Calgary Street	SSSC	C (SB)	22.3	D (SB)	27.1
9. Geneva Avenue/Schwerin Street	Signalized	B	16.6	B	16.1
10. Geneva Avenue/Bayshore Boulevard	Signalized	C	23.2	C	23.7
11. Visitation Avenue/Bayshore Boulevard	Signalized	B	14.0	B	13.5
12. Velasco Avenue/Santos Street	AWSC	A (SB)	7.9	A (NB)	8.8

^a SSSC indicates a Side-Street Stop-Controlled intersection, and AWSC indicates an All-Way Stop-Controlled intersection; for SSSC and AWSC intersections, LOS and delay is presented for the worst approach (i.e., the approach with the highest delay), indicated in parenthesis (i.e., NB = Northbound; SB = Southbound; EB = Eastbound; and WB = Westbound).

SOURCE: CHS Consulting Group, March 2013.

Impact A-TR-2: Effects on Transit

NEPA/CEQA: The Reduced Development/Density Alternative would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the alternative would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

The following discussion includes the Reduced Development/Density Alternative's effect on existing transit operations along routes that serve the project area.

Bus Transit Operations

A transit delay caused by a project would be considered significant if the project would generally increase travel times such that the project's travel time increases to a particular route would be greater than half of its existing headway. If this were found, a more detailed transit travel delay analysis would be undertaken for those routes.

The Reduced Development/Density Alternative would result in 2,556 transit trips, which would be 1,193 fewer net new trips on transit than would the proposed project. These trips would be distributed, proportionally, across the day at the same hours as those from the proposed project.

With the alternative, the following delays would occur on the following routes:

- **8X Bayshore Express** P.M. Southbound/Westbound delay would increase by 19.8 seconds, which is less than half of the route's 8-minute headway.
- **8X Bayshore Express** P.M. Northbound/Eastbound delay would increase by 34 seconds, which is less than half of the route's 8-minute headway.
- **8BX Bayshore "B" Express** P.M. Southbound/Westbound delay would increase by 19.8 seconds, which is less than half of the route's 8-minute headway. (The 8BX has no Northbound/Eastbound service during P.M. periods.)
- **9 San Bruno**, P.M. Southbound/Westbound delay would increase by 18.2 seconds, which is less than half of the route's 12-minute headway.
- **9 San Bruno**, P.M. Northbound/Eastbound delay would increase by 9.6 seconds, which is less than half of the route's 12-minute headway.
- **56 Rutland**, P.M. delay would increase by 4.4 seconds, which is less than half of the route's 30-minute headway. (The route is circular, with no service in the opposite direction.)

Therefore, the alternative would result in an increase in transit travel time on Muni transit lines, but increases would be less than those under the proposed project, and less than half of each route's headway. Therefore, this alternative would result in a less-than-significant impact to existing bus transit operations.

Transit Capacity Analysis

The project would have a significant impact if the addition of project trips would exceed Muni's standard of 85 percent capacity utilization at Muni screenlines. All screenlines currently operate below Muni's 85 percent standard during the weekday a.m. and p.m. peak hours, with the southwest screenline being the most crowded. The Reduced Development/Density Alternative would generate 2,556 net new daily transit trips and 360 net new p.m. peak-hour transit trips, which would be 1,193 fewer net new daily transit trips and 202 fewer net new p.m. peak-hour transit trips than the proposed project. Of the 360 transit trips in the p.m. peak hour, approximately 231 trips would occur in the inbound direction and 129 trips would occur in the outbound direction based on the trip distribution pattern for the project area. These trips would be spread over different Muni bus lines as well as onto regional transit services with connections via local Muni bus lines.

The Reduced Development/Density Alternative would add passengers to Bus Routes 9, 8BX (which operates in place of the 8X in the peak direction during commute hours), and T Third light rail. Under this alternative, the T Third would have a load at the MLP that exceeds Muni's standard of 85 percent capacity utilization during the a.m. and p.m. peak hours, and Route 8BX would have a load at the MLP above Muni's 85 percent capacity utilization rate during the p.m. peak hour only. It is estimated that the Reduced Development/Density Alternative would add

about 89 riders to the outbound Route 8BX during the p.m. peak hour, which constitutes approximately 14 percent of the overall riders. The project would also add about 10 riders to the outbound T Third during the p.m. peak hour and to the inbound T Third during the a.m. peak hour. These increases constitute approximately 1 percent of overall riders. With the addition of these transit trips, the service levels of these transit routes are expected to worsen. Approximately 143 and 14 project transit trips are expected to cross the Southeast and Northwest screenlines, respectively, during the peak hour in the peak direction. However, all Muni screenlines would continue to operate under its 85 percent of capacity with the addition of project trips, as shown in **Table 4.8-4**. Therefore, impacts to transit capacity would be less than significant.

TABLE 4.8-4
EXISTING PLUS ALTERNATIVE A: MUNI SCREENLINE CAPACITY UTILIZATION DURING
WEEKDAY A.M. AND P.M. PEAK-HOURS

Screenline	Added Trips	Total Ridership	Utilization
A.M. Peak-Hour¹			
Northeast	0	1,882	50%
Northwest	14	7,448	65%
Southeast	143	4,391	70%
Southwest	0	6,627	76%
Total	157	20,348	67%
P.M. Peak-Hour²			
Northeast	0	1,886	52%
Northwest	14	6,635	66%
Southeast	143	4,811	68%
Southwest	0	7,434	77%
Total	157	20,766	68%

¹ Toward downtown

² Away from downtown

SOURCE: CHS, 2013

Similar to the analysis of Muni, the analysis of regional transit screenlines assesses the effect of project-generated transit-trips on transit conditions in the outbound direction during the weekday p.m. peak hour. During the weekday p.m. peak hour, there would be about five transit trips destined to the East Bay, four transit trips to the North Bay, and six transit trips to the South Bay. The addition of passengers generated by this alternative would not have a substantial effect on the regional transit providers during the weekday p.m. peak hour, because the capacity utilization for all regional transit providers would remain similar to those under existing conditions. As discussed in Section 3.8.3, Existing Transit Network, the East Bay screenline currently operates with ridership lower than BART's one-hour load factor of 135 percent. The addition of five trips from the project would be considered minimal.

Transit impacts would be *less than significant* under NEPA and CEQA because the alternative would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers at applicable screenlines, nor cause a substantial increase in delays or operating

costs; thus, the proposed project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Mitigation: None required.

Impact A-TR-3: Effects on Pedestrians and Bicyclists

NEPA/CEQA: The Reduced Development/Density Alternative would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Less than Significant)

The Reduced Development/Density Alternative, identical to the proposed project, would realign the existing street network, relocate bus stops, and reconfigure existing lane configurations to accommodate additional bicycle facilities, and provide sidewalks and bicycle lanes as described in the Project Description. The following discussion includes the alternative's effects to pedestrian and bicycle safety and accessibility due to these proposed changes to the existing transportation network.

Pedestrian Impact Analysis

The Reduced Development/Density Alternative would generate a total of 728 daily pedestrian trips and 63 p.m. peak-hour pedestrian trips (plus 360 trips to and from a transit stop). In comparison to the proposed project, this alternative would generate 20 fewer daily pedestrian trips, four fewer p.m. peak-hour pedestrian trips (and 202 fewer trips to and from a transit stop).

Under the Reduced Development/Density Alternative (and as described for the proposed project), on-site transportation improvements would include new sidewalks and crosswalks and widening of existing walkways to improve pedestrian circulation in and around the project site. Other new improvements would include corner and mid-block bulb-outs to provide better pedestrian connections and improve pedestrian safety. Sidewalks would be wheelchair accessible with curb-cuts at the intersections in compliance with the ADA. Additional street lighting and landscaping would be implemented under this alternative, and such improvements would be consistent with the City's Better Street Plan which prioritizes walking and the use of streets as public spaces for social interaction and community life. Like the proposed project, potential pedestrian and vehicular conflicts would remain low due to improved pedestrian facilities, as well as overall fewer pedestrian trips that would be generated as compared to the proposed project.

Based on these findings, the Reduced Development/Density Alternative would result in a ***less-than-significant*** impact on pedestrian conditions because it would not result in substantial overcrowding, create potentially hazardous conditions for pedestrians, or interfere with pedestrian accessibility to the site and adjoining areas.

Bicycle Impact Analysis

The Reduced Development/Density Alternative, would have bicycle facilities identical to the proposed project. It would include new bicycle facilities along adjacent roadways to enhance bicycle circulation and bicycle access, as shown in Figure 2-5. Such planned improvement would not result in, or contribute to, traffic congestion or vehicle delay on affected roadways because they would not reduce the number of traffic lanes or substantially increase traffic or delays.

The Reduced Development/Density Alternative would generate approximately 29 new person trips using “Other” modes (i.e., other than driving, taking transit or walking) during the p.m. peak hour. This alternative would generate 13 fewer new “Other” person trips than the proposed project. The majority of these trips would likely be by bicycle. Because the existing bicycle volumes in the area were observed to be relatively low, the proposed bicycle facilities would be sufficient to accommodate any new bicycle trips in the area.²¹

Potential Transit Conflicts with Proposed Bicycle Facilities

Because the Reduced Development/Density Alternative would include new bicycle facilities along existing roadways currently utilized by bus transit vehicles, the potential adverse effects to existing transit service caused by this alternative would be identical to those associated with the proposed project. The analysis has determined that installation of new bicycle facilities would not result in a greater potential for conflicts between bicyclists and bus transit vehicles.

The Reduced Development/Density Alternative, identical to the proposed project, would implement new bicycle facilities that could adversely affect four existing bus stop locations. The analysis has determined that both buses and bicyclists would have sufficient right-of-ways to travel comfortably alongside each other and the alternative would not result in a greater potential for conflicts between bicyclists and bus transit vehicles.

Bicycle and Pedestrian Conflicts with Other Modes

Parking. The proposed street layout under the Reduced Development/Density Alternative would be the same as described under the proposed project. No on-street parking would be lost due to installation of the planned bicycle facilities on existing roadways and existing on-street parking would be maintained. Therefore, the alternative would not result in a greater potential for conflicts between bicyclists, pedestrians, and parked vehicles.

Transit. The proposed street layout under the Reduced Development/Density Alternative would be the same as described under the proposed project. Similar to the proposed project, the alternative would not result in a greater potential for conflicts between bicyclists, pedestrians, and transit vehicles.

Loading. The Reduced Development/Density Alternative would have loading facilities identical to the proposed project, which would include designated on-street loading spaces in front of the main entrance to buildings. Given there would be a sufficient number of loading spaces provided

²¹ Observations were conducted on Sunday, August 29, 2010, and on Thursday, September 23, 2010.

within the project site, no conflicts are expected with pedestrian and bicycle activities on adjacent streets. As described for the proposed project and applicable to this alternative, the off-street loading dock would be located adjacent to the mixed-use senior housing building in Block 3, and the loading dock access would be made from Center Street, near Hahn Street. Potential conflict points would exist at the loading dock entry and exit off Center Street. However, trucks backing into the loading dock would generally be expected to move slowly so that the trucks are highly visible to bicyclists and pedestrians. Therefore, the alternative would not result in a greater potential for conflicts between bicyclists, pedestrians, and vehicles performing on-site loading and unloading activities.

Given all of the above, the alternative would result in a *less-than-significant* impact under NEPA and CEQA because it would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Mitigation: None required.

Impact A-TR-4: Loading Effects

NEPA/CEQA: The Reduced Development/Density Alternative would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the alternative would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant)

The analysis of loading impacts are specific to the Reduced Development/Density Alternative, and includes a comparison of proposed loading space supply to the *Planning Code* requirements and the estimated loading demand during the peak hour of loading activities. Further, it should be noted that the Reduced Development/Density Alternative would be subject to the same requirements as described for the proposed project and must adhere to such standards set forth in the San Francisco *Planning Code* Section 152.

The residential component of the Reduced Development/Density Alternative would include approximately 1,393,000 gsf of building spaces; however, the area would be spread over 33 detached buildings. Any building larger than 100,000 gsf would require one off-street loading space. Similar to the proposed project, retail use would require one off-street loading space. As a result, the alternative would require a total of two off-street loading spaces (one fewer space than the proposed project). As stated in Chapter 1, the alternative would require an SUD that would enable modifications from the requirements of the *Planning Code* to allow for more flexibility in the placement of rear yards, setbacks, location and number of parking and loading spaces, among other standards.

Loading Supply

The Reduced Development/Density Alternative, identical to the proposed project, would provide one off-street loading space as part of the mixed-use senior building. It would be deficient by one off-street loading space, and the project sponsor would seek exceptions through application for a rezoning that would create a SUD.

The alternative would provide on-street loading spaces throughout the site, the exact location of which would be determined based on the in the future with collaboration with the SFMTA.

Loading Demand

The Reduced Development/Density Alternative would generate 53 daily truck trips, which equals a demand for two spaces during the average loading hour and three spaces during the peak loading hour. This alternative would generate 24 fewer daily trucks trips in comparison to the proposed project. Because the alternative would provide one off-street loading space, the remaining loading activities would need to be accommodated on the on-street loading spaces. The project would have sufficient street frontages along Sunnydale Avenue to accommodate the necessary loading demand.

Passenger Loading Activities

As described for the proposed project and applicable to the Reduced Development/Density Alternative, passenger loading and unloading activities would most likely occur near the main entrance to buildings throughout the project area. The project sponsor must petition the SFMTA to designate parts of street frontages as white (passenger) loading zones in front of the main entrance to each building.

Trash and Recycling Storage and Collection

The activities associated with the storage and collection of trash and recycling would be the same under the Reduced Development/Density Alternative as described for the proposed project. As master planning proceeds to the schematic design stage for the proposed buildings, the project sponsor would work with Recology, the City's trash, recycling, and compost hauler, and with the San Francisco Department of the Environment and SFMTA's Sustainable Streets Division to ensure that trash, recycling, and composting facilities are stored in accessible locations for pick-up, and remain on the street for the shortest time possible before and after pick-up, and to minimize pedestrian and other traffic disruption during collection. The alternative would adhere to the solid waste storage and access requirements of the City's Green Building Ordinance.

In summary, the loading demand associated with the Reduced Development/Density Alternative would be sufficiently accommodated on the designated off-street loading space and on-street loading zones to be provided throughout the project site. Because the Reduced Development/Density Alternative would have sufficient loading spaces on the project site and its trash collection would not interfere with pedestrian and other traffic, the project would result in a *less-than-significant* impact on loading conditions under NEPA and CEQA.

Mitigation: None required.

While the alternative's loading impacts would be less than significant, the following improvement measure may be adopted as conditions of project approval by City decision makers to facilitate loading and minimize traffic disruption.

Improvement Measure I-TR-D.

Impact A-TR-5: Effects on Emergency Access

NEPA/CEQA: The Reduced Development/Density Alternative would not result in inadequate emergency access. (Less than Significant)

Access to the project site by general and emergency vehicles would be the same under the Reduced Development/Density Alternative as described for the proposed project. Overall, access to the project site would not be substantially different from existing conditions and with implementation of the planned on-site transportation and circulation improvements, emergency vehicle access to the project site would be maintained. Furthermore, as discussed under the proposed project and applicable to the Reduced Development/Density Alternative, the project sponsor would ensure that all developments are designed in accordance with the City standards to provide adequate emergency access.

Based on these findings, the Reduced Development/Density Alternative would not result in inadequate emergency access and the adverse effects to emergency access would be *less than significant* under NEPA and CEQA.

Mitigation: None required.

Construction Impacts

Impact A-TR-6: Construction Effects

NEPA/CEQA: Construction under the Reduced Development/Density Alternative would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant with Mitigation)

The construction activities under the Reduced Development/Density Alternative would be similar to those described under the proposed project, occurring over the same 9- to 15-year duration in three phases. However, under this alternative, there would be 328 fewer units built than the proposed project, which would reduce the intensity of construction activities (although demolition and grading activities would be the same as under the proposed project). Other than the different number of planned dwelling units, the construction impacts of the Reduced Development/Density Alternative would be similar to that described and analyzed for the proposed project.

Because construction activities would be substantially similar, or to a degree lessened, under the Reduced Development/Density Alternative, as compared to the proposed project, the alternative would not result in adverse effects to the surrounding circulation network during construction

activities. However, such activities would require temporary roadway closures for 15 to 18 months in each phase for the site demolition, re-grading, and utility infrastructure construction (same as for the proposed project), and could result in significant impacts to site access, traffic, transit, and pedestrian safety. Implementation of **Mitigation Measure M-TR-6** would reduce potential construction impacts by requiring preparation and implementation of a traffic control plan during construction, in coordination with local agencies. The plan would include measures to address street closures and ensure safe access.

The impact would be *less-than-significant with mitigation* under NEPA and CEQA because, while construction under the alternative could potentially result in intermittent degradation of intersection levels of service, result in delays to transit, interfere with pedestrian and bicycle accessibility to the site and adjoining area, and/or disrupt emergency access, the impact would be reduced to a less-than-significant level with implementation of identified mitigation.

Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.

Parking Information

As discussed above, pursuant to *Public Resources Code* Section 21099(d), this document does not consider adequacy of parking in determining the significance of impacts.

The same approach used to analyze parking conditions with implementation of the proposed project was applied to the Reduced Development/Density Alternative.

Parking Requirements

Based on the *Planning Code* for the RM-1 District, the Reduced Development/Density Alternative would be required to provide a minimum of 520 off-street parking spaces for the residential use, 39 off-street parking spaces for the retail use, and 156 off-street parking spaces for the recreation and community center use for a total of 715 spaces. As a result, the Reduced Development/Density Alternative would exceed the minimum requirements for the residential use; however, the alternative would not meet the minimum requirements for the retail and recreation and community center uses. The project sponsor would apply for a rezoning that would create an SUD to allow the retail and recreation and community center's parking demand to be met on the street.

Parking Supply and Demand

Currently, there are 430 off-street and 452 on-street parking spaces on the project site. The Reduced Development/Density Alternative would provide 1,123 off-street and 481 on-street parking spaces, resulting in a net increase of 693 off-street and 29 on-street parking spaces relative to existing conditions. Similar to the proposed project, all 1,378 off-street parking spaces would be dedicated for the residential use and none would be provided for the retail or community uses. The off-street residential parking spaces would be distributed at approximately 0.82 spaces per housing unit.

The Reduced Development/Density Alternative would generate a demand for approximately 1,492 parking spaces, while there would be 1,123 structured parking and 481 on-street parking

spaces. As a result, there would be a surplus of approximately 112 on-street parking spaces and therefore, the alternative would provide an adequate supply of parking to accommodate anticipated demand. The alternative would not result in a substantial parking deficit that would create hazardous conditions or significant delays affecting traffic, transit, bicycles or pedestrians.

Alternative B: One-for-One Replacement Alternative

Travel Demand Analysis

Under the One-for-One Replacement Alternative, the type of land uses would remain the same as the existing conditions, and the project would not generate any net new daily or p.m. peak-hour person trips.

Impact B-TR-1: Effects on Levels of Service

NEPA/CEQA: The One-for-One Replacement Alternative would not cause levels of service at local intersections to deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (No Impact)

The One-for-One Replacement Alternative would not generate any new vehicle trips throughout nearby roadways and intersections. Therefore, the 12 study intersections would continue to operate at acceptable service levels as presented under existing conditions.

There would be *no impact* under NEPA and CEQA because the alternative would not cause levels of service at local intersections to deteriorate, and would therefore not conflict with any applicable congestion management programs, plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system at those locations.

Mitigation: None required.

Impact B-TR-2: Effects on Transit

NEPA/CEQA: The One-for-One Replacement Alternative would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the alternative would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (No Impact)

The One-for-One Replacement Alternative would not generate any new weekday peak-hour transit trips nor modify the existing transit circulation network.

There would be *no impact* under NEPA and CEQA because the alternative would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers, nor cause a substantial increase in delays or operating costs; thus, the proposed project would not

conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

Mitigation: None required.

Impact B-TR-3: Effects on Pedestrians and Bicyclists

NEPA/CEQA: The One-for-One Replacement Alternative would not create potentially hazardous conditions for pedestrians or bicyclists, or otherwise substantially interfere with pedestrian or bicyclist access, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (No Impact)

The One-for-One Replacement Alternative would not generate any new pedestrian and bicycle trips nor modify the existing bicycle and pedestrian circulation network.

There would be *no impact* under NEPA and CEQA because the alternative would not create potentially hazardous conditions for bicyclists and pedestrians or otherwise substantially interfere with bicycle and pedestrian accessibility to the project site and adjoining areas, and would not substantially conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Mitigation: None required.

Impact B-TR-4: Loading Effects

NEPA/CEQA: The One-for-One Replacement Alternative would result in a loading demand that could be accommodated within on-site and nearby on-street loading facilities; thus, the alternative would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (No Impact)

The One-for-One Replacement Alternative would not generate any new loading demand that would affect any existing on-site or nearby on-street loading zones, nor result in the need for additional loading spaces. Loading conditions under this alternative would be the same as existing conditions, and the One-for-One Replacement Alternative would have *no impact* on loading under NEPA and CEQA.

Mitigation: None required.

Impact B-TR-5: Effects on Emergency Access

NEPA/CEQA: The One-for-One Replacement Alternative would not result in inadequate emergency access. (No Impact)

Under the One-for-One Replacement Alternative, there would be no changes to the existing street layout in and around the project site and access to the site by emergency vehicles would be the

same as under existing conditions. As a result, the project under this alternative would result in *no impact* to emergency access under NEPA and CEQA.

Mitigation: None required.

Construction Impacts

Impact B-TR-6: Construction Effects

NEPA/CEQA: Construction under the One-for-One Replacement Alternative would conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. (Less than Significant with Mitigation)

The construction activities under the One-for-One Replacement Alternative would be phased in a similar manner as described under the proposed project. However, under this alternative, there would be no increase in the number of dwelling units; the existing 785 family and senior dwelling units at the Sunnydale and Velasco public housing complexes would be replaced. Therefore, reconstruction of the entire site would occur over an approximately 6-year period, with each phasing taking 24 months. Moreover, although the alternative would require identical demolition activities, it would require substantially less re-grading of the site, and no street alignment. Therefore, there would be less intensive overall construction activities, for a shorter duration, than under either the proposed project or Alternative A.

Because construction activities would be lessened under the One-for-One Replacement Alternative as compared to the proposed project, the alternative would not result in any potential adverse effects to the surrounding circulation network during construction activities. However, because such activities would require temporary roadway closures and could result in significant impacts to site access, traffic, transit, pedestrian and bicycle safety, and/or emergency access during the construction period, resulting in significant impacts, implementation of **Mitigation Measure M-TR-6** would reduce be required potential construction impacts.

The impact would be *less-than-significant with mitigation* under NEPA and CEQA because, while construction under the alternative could potentially result in intermittent degradation of intersection levels of service, result in delays to transit, interfere with pedestrian and bicycle accessibility to the site and adjoining areas, and/or disrupt emergency access, the impact would be reduced to a less-than-significant level with implementation of identified mitigation.

Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.

Parking Impacts

As discussed above, pursuant to *Public Resources Code* Section 21099(d), this document does not consider adequacy of parking in determining the significance of impacts.

The same approach used to analyze parking conditions with implementation of the proposed project was applied to the One-for-One Replacement Alternative.

Parking Requirements

As explained in Section 3.2, per *Planning Code* Section 151, Table 151, affordable housing and senior housing projects do not have to provide off-street parking. Therefore, the One-for-One Replacement Alternative would not be required to provide any new parking spaces and would therefore meet the *Planning Code* requirements because there is no minimum number of parking spaces required for this alternative.

Parking Supply and Demand

The One-for-One Replacement Alternative would provide the same number of parking spaces as today, including 430 off-street and 452 on-street parking. The off-street residential parking spaces would be distributed the same as today at approximately 0.54 spaces per housing unit. Furthermore, the parking demand under this alternative would be the same demand as existing conditions. Therefore, there would be demand for approximately 676 parking spaces, while there would be 430 off-street parking and 452 on-street parking spaces. As a result, there would be a surplus of approximately 206 on-street parking spaces, as under existing conditions. The alternative would not result in a substantial parking deficit that would create hazardous conditions or significant delays affecting traffic, transit, bicycles or pedestrians.

Alternative C: No Action Alternative

The No Action Alternative would have no effects on transportation and circulation compared to the proposed project because no construction or operation of new or expanded facilities at the project site would occur. Therefore, the alternative would not result in the generation of new vehicle, transit, bicycle, and pedestrian trips, nor would it require new parking and loading spaces or result in any new access, streetscape design features, or new bicycle facilities along existing roadways. Therefore, the alternative would result in no changes to the existing transportation, circulation, and parking conditions, and therefore, there would be *no impact*, under both CEQA and NEPA.

4.8.4 Cumulative Impacts

Impact CC-TR-1: Cumulative Effects on Levels of Service

NEPA/CEQA: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system. (Significant and Unavoidable)

As explained above, the traffic analysis originally analyzed cumulative conditions in year 2030 using traffic volumes obtained from the *Candlestick Point – Hunters Point Shipyard Phase II*

Development Plan Transportation Study. This study presented a conservative (i.e. worst case) estimation of traffic volumes in 2030. While the project was undergoing environmental review, and after analysis of cumulative impacts using the 2030 estimation of traffic volumes was completed, the Planning Department updated its methodology for evaluation of cumulative impacts. Therefore, the analysis was updated for the 2040 year using a different methodology from that used for 2030. For the 2040 methodology, the modal split assumptions found in the 2012 American Community Survey data, and future cumulative traffic volumes for year 2040 were developed using the latest SF-CHAMP model outputs.²²

The 2040 analysis resulted in fewer impacts to LOS than did the 2030 analysis because, for large projects such as the Candlestick Point – Hunters Point Shipyard project, the transportation model assumes a reduction in traffic to account for the fact that, in a manual trip assignment, some trips are counted twice (i.e., a person counted as traveling from home in the analysis of the project’s residential component may also be counted as a person traveling to work in the analysis of the project’s employment component). Therefore, while it is likely that the model-based analysis of 2040 conditions is more realistic, 2030 conditions are also reported here, to provide a thorough analysis and full disclosure. A memorandum was prepared presenting both the 2030 and 2040 analyses, and a summary of this memorandum, including the different 2030 and 2040 methodologies, is presented below.²³

2030 Methodology

Under cumulative (no project) conditions using the 2030 methodology, level of service (LOS) operating conditions would remain at LOS D or better, except at the following seven study intersections, which would operate at LOS E or F:

- Sunnydale Avenue / Bayshore Boulevard
- Geneva Avenue / Brookdale Avenue
- Geneva Avenue / Santos Street
- Geneva Avenue / Calgary Street
- Geneva Avenue / Schwerin Street
- Geneva Avenue / Bayshore Boulevard
- Visitacion Avenue / Bayshore Boulevard

2040 Methodology

Under cumulative (no project) conditions using the 2040 methodology, level of service (LOS) operating conditions would remain at LOS D or better, except at the following seven study intersections, which would operate at LOS E or F:

- Sunnydale Avenue / Bayshore Boulevard

²² The American Community Survey (ACS) is conducted every year to provide up-to-date information about the social and economic needs of communities, whereas the census is conducted every 10 years to provide an official count of the entire U.S. population to Congress.

²³ CHS Consulting Group, Memorandum RE: Sunnydale-Velasco Housing Development Traffic Study – Update of Traffic and Transit Conditions under Existing Plus Project and 2040 Cumulative Conditions, September 2014.

- Geneva Avenue / Brookdale Avenue
- Geneva Avenue / Schwerin Street

Proposed Project

2030 Methodology

Under the 2030 methodology, based on the significance criteria (see Section 4.8.2), the proposed project would have a significant traffic impact at the unsignalized Intersection #3 (Sunnydale Avenue / Schwerin Street) because the operating condition on the worst approach would deteriorate from LOS C to LOS E. In addition, at the above-cited study intersections that would operate at LOS E or F under 2030 cumulative conditions during the weekday p.m. peak hour, the proposed project's contribution would be cumulatively considerable at five intersections because the proposed project would cause the LOS at an intersection to degrade from LOS E to LOS F or contribute more than 5 percent of the volume at one or more critical turning movements at intersections that would operate at unacceptable LOS conditions, and therefore would make a considerable contribution to a cumulative significant impact. **Table 4.8-5** presents these findings.

Intersection #3: Sunnydale Avenue / Schwerin Street

Under the 2030 methodology, the proposed project would cause the LOS on the worst approach to deteriorate from LOS C to LOS E, and the intersection would meet the Caltrans signal warrant under Cumulative Plus Project conditions. This would be considered a significant traffic impact. Implementation of **Mitigation Measure M-CC-TR-1(a)**, which would include addition of a left-turn pocket on the westbound approach, would improve the LOS on the worst approach to LOS C and reduce cumulative traffic impacts to a less-than-significant level. This mitigation measure could result in a loss of two on-street parking spaces. However, the feasibility of this measure is not known at this time because the project sponsor does not have control over implementation of the measure. SFMTA would have to further evaluate traffic circulation and volumes in the project area, the impact at this intersection would remain significant and unavoidable, due to the uncertainty of implementing this measure.

Intersection #4: Sunnydale Avenue / Bayshore Boulevard

Under the 2030 methodology, the proposed project would cause the intersection operating condition to deteriorate from LOS E to F and would be therefore considered a significant traffic impact. The average delay with implementation of the proposed project at this intersection would be 87 seconds per vehicle, of which the proposed project would contribute approximately 20 percent (17 seconds) of the overall delay at the intersection. Improvements such as providing additional traffic lanes are not feasible at this intersection because it would require substantial reduction in proposed sidewalk widths or bike lanes. There is not a parking lane available in the immediate area of the intersection that would provide space for an additional travel lane. In addition, signal timing adjustments would be infeasible due to integrated signal timing for traffic and transit on Bayshore Boulevard, where changes in signal timing at one intersection could result in new impacts at another intersection. No feasible mitigation measures were identified; therefore, impacts would remain significant and unavoidable.

TABLE 4.8-5
INTERSECTION LEVEL OF SERVICE (LOS) CONDITIONS WEEKDAY P.M. PEAK HOUR
EXISTING, 2030 CUMULATIVE, 2030 CUMULATIVE PLUS PROPOSED PROJECT,
2040 CUMULATIVE, AND 2040 CUMULATIVE PLUS PROPOSED PROJECT

Intersection	Existing Conditions		Cumulative (2030) Conditions		Cumulative (2030) Conditions plus Proposed Project		Cumulative (2040) Conditions		Cumulative (2040) Conditions plus Proposed Project	
	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b
1. Sunnydale Avenue/ Persia Avenue	B (NB)	13.2	C (NB)	17.6	C (NB)	21.9	C (NB)	20.7	E (NB)	42.6
2. Sunnydale Avenue/Sawyer Street	A (EB)	8.2	B (WB)	10.7	B (WB)	12.9	B (WB)	10.6	B (WB)	12.8
3. Sunnydale Avenue/Schwerin Street	A (WB)	9.9	C (WB)	20.3	E (WB)	37.3	C(WB)	16.8	D (WB)	26.1
4. Sunnydale Avenue/Bayshore Boulevard	C	20.2	E	69.7 (1.11)	F	>80 (1.20)	F	>80 (1.14)	F	>80 (1.24)
5. Sunnydale Avenue/Santos Street	A (WB)	8.3	A (WB)	10.0	B (WB)	12.8	B (WB)	11.7	C (WB)	17.4
6. Geneva Avenue/Brookdale Avenue	C (SB)	21.9	F (SB)	>50	F (SB)	>50	E (SB)	41.8	F (SB)	>50
7. Geneva Avenue/Santos Street	B	19.9	F	>80 (1.50)	F	>80 (1.58)	C	21.2	C	33.8
8. Geneva Avenue/Calgary Street	C (SB)	22.3	F	>50	F (SB)	>50	F (SB)	>50	F (SB)	>50
9. Geneva Avenue/Schwerin Street	B	16.6	F	>80 (1.70)	F	>80 (1.75)	B	15.4	B	16.3
10. Geneva Avenue/Bayshore Boulevard	C	23.2	F	>80 (1.58)	F	>80 (1.62)	D	46.0	D	50.7
11. Visitacion Avenue/Bayshore Boulevard	B	14.0	E	71.8 (1.13)	F	>80 (1.16)	C	28.1	C	29.8
12. Velasco Avenue/Santos Street	A (SB)	7.9	B (SB)	10.4	B (SB)	13.8	A (SB)	8.5	B (NB)	11.3

^a Levels of service (LOS) and delay (in seconds per vehicle) were determined using the analysis methodologies presented in the 2000 *Highway Capacity Manual*.

^b SSSC indicates a Side-Street Stop-Controlled intersection, and AWSC indicates an All-Way Stop-Controlled intersection; for SSSC and AWSC intersections, LOS and delay is presented for the worst approach (i.e., the approach with the highest delay), indicated in parenthesis (i.e., NB = Northbound; SB = Southbound; EB = Eastbound; and WB = Westbound. The LOS and delay for signalized intersections represent conditions for the overall intersection. For signalized intersections operating at LOS E or F, volume-to-capacity (V/C) ratio is reported.

Bold text indicates study intersection would operate at unacceptable LOS conditions (LOS E or F).

Shaded represents a project-related significant traffic impact to the study intersection.

SOURCE: CHS Consulting Group, March 2013; September 2014.

Intersection #6: Geneva Avenue / Brookdale Avenue

Under the 2030 methodology, the intersection would continue to operate at LOS F, and the proposed project traffic would not cause signal warrants to be met due to low traffic volumes on the worst approach. Southbound Brookdale Avenue would carry a total of 88 vehicles (including the addition of 44 project trips) during the p.m. peak hour while a minimum of 100 vehicle trips are needed to meet the signal warrant. Since the intersection would not meet the signal warrant due low traffic volume in the worst approach (i.e., southbound), the project specific impact would be considered to be less-than-significant.

Although the intersection operational impacts would be considered to be less-than-significant, southbound traffic on Brookdale Avenue would not be able to make left-turns when traffic volumes are heavy along Geneva Avenue, and therefore improvement measures are identified to improve upon this less-than-significant impact. Approximately 47 vehicles would be making left-turns from Brookdale Avenue onto Geneva Avenue (i.e., 41 project trips and 6 background trips) during the p.m. peak-hour, and these vehicles could take alternative routes to access Geneva Avenue. Providing additional traffic lanes along Geneva Avenue or Brookdale Avenue would not improve the intersection operating conditions, although **Improvement Measure I-CC-TR**, which would require the sponsor to work with SFMTA to prohibit left turns at the intersection at the intersection, could improve intersection operations.

Intersection #7: Geneva Avenue / Santos Street

Under the 2030 methodology, the intersection would continue to operate at LOS F under 2030 cumulative conditions with the proposed project. The proposed project would add 87 vehicles to the critical southbound left-turn (SBL) movement during the p.m. peak hour, which would more than double the SBL volume, and therefore would be considered a considerable contribution to this critical movement. **Mitigation Measure M-CC-TR-1(b)**, which would require the SFMTA to add a left-turn pocket at the intersection of Geneva Avenue and Santos Street on the southbound approach, would improve intersection operations. However, signal timing adjustments would be infeasible due to coordinated signal timing on Geneva Avenue, which could lead to new impacts at other intersections. Moreover, the project sponsor does not have control over implementation of the measure, and the SFMTA would have to further evaluate traffic circulation and volumes in the project area. Therefore, the impact at this intersection would remain significant and unavoidable.

Intersection #9: Geneva Avenue / Schwerin Street

Under the 2030 methodology, the intersection would continue to operate at LOS F under 2030 cumulative conditions with the proposed project. The proposed project would add 232 vehicles to the critical westbound through (WBT) movement during the p.m. peak hour, approximately 7 percent of the WBT volume, and therefore would be considered a considerable contribution to this critical movement. **Mitigation Measure M-CC-TR-1(c)**, which would require the SFMTA to add a right-turn pocket at intersection of Geneva Avenue and Schwerin Street on the westbound and southbound approaches, would improve intersection operations and reduce cumulative traffic impacts. However, the overall intersection operations with this mitigation would remain at unacceptable levels mainly due to heavy increase in background traffic along Geneva Avenue. In addition, signal timing adjustments would be infeasible due to coordinated signal timing on

Geneva Avenue, where changes in signal timing at one intersection could result in new impacts at another intersection. Moreover, the project sponsor does not have control over implementation of the measure, and the SFMTA would have to further evaluate traffic circulation and volumes in the project area. Therefore, the impact would remain significant and unavoidable.

Intersection #10: Geneva Avenue / Bayshore Boulevard

Under the 2030 methodology, the intersection would continue to operate at LOS F under 2030 cumulative conditions with the proposed project. The proposed project would add 150 vehicles to the critical westbound through movement, 83 vehicles to the critical southbound right-turn movement, and 47 vehicles to the critical eastbound left-turn movement during the p.m. peak hour. That would constitute 9 percent, 8 percent, and 5 percent of the volume in each movement, respectively, and therefore would be considered a considerable contribution to these critical movements. Improvements such as providing additional traffic lanes are neither feasible nor recommended because it would require expansion of the roadway and substantial reduction in sidewalk widths. Signal timing adjustments are infeasible due to coordinated signal timing on Bayshore Boulevard, where changes in signal timing at one intersection could result in new impacts at another intersection. No feasible mitigation measures were identified; therefore, the impacts would remain significant and unavoidable.

Intersection #11: Visitacion Avenue / Bayshore Boulevard

Under the 2030 methodology, the proposed project would cause the intersection operating conditions to deteriorate from LOS E to F and would therefore be considered a significant traffic impact. Improvements such as providing additional traffic lanes are not feasible because it would require substantial reduction in sidewalk widths. There is limited space for additional traffic lanes due to the bus zone on Visitacion Avenue, and a parking lane already has been removed along Bayshore Boulevard to maximize vehicle turning movements at the intersection. Signal timing adjustments are infeasible due to coordinated signal timing on Bayshore Boulevard, where changes in signal timing at one intersection could result in new impacts at another intersection. No feasible mitigation measures were identified; therefore, the impacts would remain significant and unavoidable.

2040 Methodology

Under the 2040 methodology, the proposed project would have a significant traffic impact at the unsignalized Intersection #1 (Sunnydale Avenue / Persia Street). It would cause the intersection operating condition to deteriorate from LOS C to E. Table 4.8-5 presents these findings.

Intersection #1: Sunnydale Avenue / Persia Street

Under the 2040 methodology, the proposed project would cause the LOS on the worst approach to deteriorate from LOS C to LOS E, and the intersection would meet the Caltrans signal warrant under Cumulative Plus Project conditions. This would be considered a significant traffic impact. Improvements would entail adding a left-turn lane at the northbound approach on Sunnydale Avenue, which would improve operating conditions to LOS C. However, since the intersection of Sunnydale Avenue and Persia Street is located within the John McLaren Park, adding a left-turn

lane at the northbound approach would require approval by the San Francisco Recreation and Park Commission and the SFMTA Board of Directors. The McLaren Park - Mansell Corridor Improvements project, planned by the SFRPD, would remove the existing pork chop at this intersection and add a pedestrian bulb-out at the southwest corner. This improvement is intended to increase the amount of usable park space in McLaren Park and shorten the intersection crossing distance for pedestrians. With implementation of the McLaren Park – Mansell Corridor Improvements project, the width of Sunnydale Avenue at the subject intersection would be too narrow to accommodate a standard left turn pocket in the northbound direction. As such, adding a left-turn lane at the northbound approach would not be feasible, and the impact would be significant and unavoidable.

Impact Conclusion

As discussed above, travel lane capacity at these intersections has been maximized, and providing additional travel lanes to mitigate impacts would not be feasible because it would not be in control of the project sponsor. Similarly, signal timing adjustments may improve intersection operations, but would be infeasible due to traffic, transit and pedestrian signal timing requirements along specific corridors, where changing the signal timing at one intersection could result in new impacts at another intersection. Therefore, the proposed project's contribution to significant traffic impacts at these intersections would be cumulatively considerable.

The impact would be *significant and unavoidable* under NEPA and CEQA because the proposed project, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.

Proposed Project Variant

The project variant would generate approximately eight fewer daily person trips and one fewer p.m. peak-hour person trip than the proposed project. Similarly, the project variant would have the same number of net new person trips for each mode and net new vehicle trips as the proposed project, as well as distribute and assign these trips as described for the proposed project.

Under the 2030 methodology, given the project variant would generate a similar amount of new vehicle trips throughout the study area as the proposed project, the same significant-and-unavoidable impacts at six study intersections would occur (see **Table 4.8-6**). Under the 2040 methodology, given the project variant would generate a similar amount of new trips as the proposed project, the same significant-and-unavoidable impact at Sunnydale Avenue / Persia Street would occur.

There are no feasible mitigation measures to reduce the potential impacts. Mitigation Measures M-CC-TR-1(a) through M-CC-TR-1(c) and Improvement Measure I-CC-TR would apply. Variant-related cumulative traffic impacts would be *significant and unavoidable* under both NEPA and CEQA.

TABLE 4.8-6
INTERSECTION LEVEL OF SERVICE (LOS) CONDITIONS WEEKDAY P.M. PEAK HOUR
EXISTING, 2030 CUMULATIVE, 2030 CUMULATIVE PLUS PROPOSED PROJECT,
2030 CUMULATIVE PLUS PROPOSED PROJECT VARIANT, AND
CUMULATIVE 2030 PLUS REDUCED DEVELOPMENT/DENSITY ALTERNATIVE

Intersection	Existing Conditions		Cumulative (2030) Conditions		Cumulative (2030) Conditions plus Proposed Project		Cumulative (2030) Conditions plus Project Variant		Cumulative (2030) Conditions plus Reduced Development/Density Alternative	
	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b	LOS ^a	Delay ^b
1. Sunnydale Avenue/ Persia Avenue	B (NB)	13.2	C (NB)	17.6	C (NB)	21.9	C (NB)	21.9	C (NB)	20.3
2. Sunnydale Avenue/Sawyer Street	A (EB)	8.2	B (WB)	10.7	B (WB)	12.9	B (WB)	12.9	B (WB)	12.0
3. Sunnydale Avenue/Schwerin Street	A (WB)	9.9	C (WB)	20.3	E (WB)	37.3	E (WB)	37.3	D (WB)	29.0
4. Sunnydale Avenue/Bayshore Boulevard	C	20.2	E	69.7 (1.11)	F	>80 (1.20)	F	>80 (1.20)	F	>80 (1.15)
5. Sunnydale Avenue/Santos Street	A (WB)	8.3	A (WB)	10.0	B (WB)	12.8	B (WB)	12.8	B (WB)	11.6
6. Geneva Avenue/Brookdale Avenue	C (SB)	21.9	F (SB)	>50	F (SB)	>50	F (SB)	>50	F (SB)	>50
7. Geneva Avenue/Santos Street	B	19.9	F	>80 (1.50)	F	>80 (1.58)	F	>80 (1.58)	F	>80 (1.60)
8. Geneva Avenue/Calgary Street	C (SB)	22.3	F	>50	F (SB)	>50	F (SB)	>50	F (SB)	>50
9. Geneva Avenue/Schwerin Street	B	16.6	F	>80 (1.70)	F	>80 (1.75)	F	>80 (1.75)	F	>80 (1.75)
10. Geneva Avenue/Bayshore Boulevard	C	23.2	F	>80 (1.58)	F	>80 (1.62)	F	>80 (1.62)	F	>80 (1.64)
11. Visitacion Avenue/Bayshore Boulevard	B	14.0	E	71.8 (1.13)	F	>80 (1.16)	F	>80 (1.16)	F	>80 (1.15)
12. Velasco Avenue/Santos Street	A (SB)	7.9	B (SB)	10.4	B (SB)	13.8	B (SB)	13.8	B (SB)	12.4

^a Levels of service (LOS) and delay (in seconds per vehicle) were determined using the analysis methodologies presented in the 2000 *Highway Capacity Manual*.

^b SSSC indicates a Side-Street Stop-Controlled intersection, and AWSC indicates an All-Way Stop-Controlled intersection; for SSSC and AWSC intersections, LOS and delay is presented for the worst approach (i.e., the approach with the highest delay), indicated in parenthesis (i.e., NB = Northbound; SB = Southbound; EB = Eastbound; and WB = Westbound. The LOS and delay for signalized intersections represent conditions for the overall intersection. For signalized intersections operating at LOS E or F, volume-to-capacity (V/C) ratio is reported.

Bold text indicates study intersection would operate at unacceptable LOS conditions (LOS E or F).

Shaded represents a project-related significant traffic impact to the study intersection.

SOURCE: CHS Consulting Group, March 2013.

Alternative A: Reduced Development / Density Alternative

The Reduced Development/Density Alternative would generate approximately 4,639 auto person trips, 2,556 transit trips, 728 walk trips, and 258 bike or walking trips on a typical day. During the p.m. peak hour, the alternative would generate 566 auto person trips, 360 transit trips, 63 walking trips, and 29 other mode trips. Furthermore, this alternative would generate approximately 3,183 daily vehicle trips and 415 p.m. peak-hour vehicle trips, which is 1,242 fewer daily vehicle trips and 206 fewer p.m. peak-hour vehicle trips in comparison to the proposed project.

Although the Reduced Development/Density Alternative would generate fewer daily and p.m. peak-hour vehicle trips than the proposed project, in 2030 the alternative's contribution would be cumulatively considerable at the same five intersections as described for the proposed project (see Table 4.8-6). The alternative's effect on the Sunnydale Avenue / Schwerin Street intersection would be less than significant. Because there are no feasible mitigation measures to reduce these potential impacts to a less-than-significant level, project-related cumulative traffic impacts at these five intersections would be significant and unavoidable. Regarding 2040, the Reduced Development / Density Alternative would generate fewer trips than the proposed project. Therefore, impacts to the intersection of Sunnydale Avenue / Persia Street would be less substantial those disclosed for the proposed project, and would likely be less than significant, given the 33 percent reduction in peak-hour vehicle trips, compared to the proposed project.

The impact would be *significant and unavoidable* under NEPA and CEQA because the alternative, in combination with past, present, and reasonably foreseeable future projects, would cause levels of service at local intersections to deteriorate and would conflict with applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.

Alternative B: One-for-One Replacement Alternative

The One-for-One Replacement Alternative would not generate any new vehicle trips through nearby roadways and intersections. As such, in 2030, five study intersections would continue to operate at acceptable service levels as presented under cumulative (no project) conditions, whereas the remainder of the intersections studied would continue to operate at unacceptable service levels (see Table 4.8-6). Because the alternative would not generate any new vehicle trips, the project's contribution under this alternative would not be cumulatively considerable at the seven intersections that operate at unacceptable LOS conditions. Similarly, the alternative would not contribute any trips to the cumulative impact in 2040.

Therefore, there would be *no cumulative impact* under NEPA or CEQA because the alternative would not make a considerable contribution to cumulative traffic impacts, and the alternative would not conflict with an applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.

Mitigation: None required.

Alternative C: No Action Alternative

Under future (2030 methodology) conditions, seven intersections would operate at unacceptable levels of service due to cumulative growth. Under the 2040 methodology, there would be three intersections that operate at unacceptable levels of service.

However, the alternative would not generate any new trips, using either the 2030 or 2040 methodology. Therefore, there would be *no cumulative impact* under NEPA or CEQA because the alternative would not make a considerable contribution to cumulative traffic impacts, and the alternative would not conflict with an applicable congestion management programs as well as plans, ordinances or policies establishing measures of effectiveness for the performance of the circulation system.

Mitigation: None required.

Impact CC-TR-2: Cumulative Transit Effects

NEPA/CEQA: The proposed project and its alternatives, in combination with past, present, and reasonably foreseeable future projects, would not cause exceedance of the capacity utilization standards for Muni lines or regional transit providers. (Less than Significant)

Bus Transit Operations

Table 4.8-7 presents the cumulative no project, project, and Alternative A transit travel times.

TABLE 4.8-7
TRANSIT CORRIDOR DELAY: FUTURE CUMULATIVE CONDITIONS WEEKDAY P.M. PEAK-HOUR

Route	Headway (min)	Cumulative No Project	Cumulative Plus Proposed Project	Proposed Project Increase	Cumulative Plus Alt. A	Alt. A Increase
Northbound/ Eastbound						
9 San Bruno	12	18:39	22:14	3:35	22:02	3:23
8X Bayshore Express	8	9:09	9:50	0:41	9:32	0:23
8BX Bayshore "B" Express	8	-	-	-	-	-
56 Rutland	20	1:29	1:46	0:17	1:40	0:11
Southbound/ Westbound						
9 San Bruno	12	13:08	14:46	1:38	14:02	0:54
8X Bayshore Express	8	9:16	10:28	1:13	9:59	0:43
8BX Bayshore "B" Express	8	9:16	10:28	1:13	9:59	0:43
56 Rutland	20	-	-	-	-	-

NOTES:

Route 8BX operates in the outbound (southbound) direction only during the p.m. period.

Westbound Route 56 operates along Wilde Avenue, Rutland Street, and Raymond Avenue which are not part of the study corridor.

SOURCE: CHS Consulting Group, 2013

Transit Capacity

Under cumulative (no project) weekday a.m. and p.m. peak-hour conditions, the future year ridership would not exceed Muni's capacity utilization standard of 85 percent along any screenlines, as shown in **Table 4.8-8**.

**TABLE 4.8-8
MUNI SCREENLINE CAPACITY UTILIZATION: FUTURE CUMULATIVE CONDITIONS
WEEKDAY A.M. AND P.M. PEAK-HOURS**

Screenline	Cumulative			Cumulative Plus Project			Cumulative Plus Alternative A		
	Ridership	Capacity	Utilization	Added Trips	Total Ridership	Utilization	Added Trips	Total Ridership	Utilization
A.M. Peak-Hour¹									
Northeast	2,629	3,857	68%	0	2,629	68%	0	2,629	68%
Northwest	8,199	11,983	68%	22	8,221	69%	14	8,213	69%
Southeast	7,172	10,197	70%	225	7,397	73%	143	7,315	72%
Southwest	7,104	10,045	71%	0	7,104	71%	0	7,104	71%
Total	25,104	36,082	70%	247	25,351	70%	157	25,261	70%
P.M. Peak-Hour²									
Northeast	2,643	4,699	56%	0	2,643	56%	0	2,643	56%
Northwest	7,413	11,612	64%	22	7,435	64%	14	7,427	64%
Southeast	7,856	9,940	79%	225	8,081	81%	143	7,999	80%
Southwest	8,252	10,703	77%	0	8,252	77%	0	8,252	77%
Total	26,164	36,954	71%	247	26,411	71%	157	26,321	71%

NOTES:

¹ Inbound direction (toward downtown)

² Outbound direction (away from downtown)

SOURCE: AECOM, February 2, 2009; CHS Consulting Group, 2013.

However, under cumulative (no project) conditions, transit ridership on regional transit lines is projected to exceed the available capacity at several corridors, as shown in **Table 4.8-9**. Capacity utilization standards would not be met for BART to the East Bay, or for AC Transit and Golden Gate Transit bus lines.

Proposed Project

Bus Transit Delay

The proposed project would increase the delay on Muni transit lines, as shown in Table 4.8-7. However, the project increase would not constitute more than half of the headway. Therefore, the project would not considerably contribute to transit delay impacts.

**TABLE 4.8-9
REGIONAL SCREENLINE CAPACITY UTILIZATION: FUTURE CUMULATIVE CONDITIONS
WEEKDAY A.M. AND P.M. PEAK-HOURS**

Screenline	Cumulative			Cumulative Plus Project/Variant Scenario			Cumulative Plus Alternative A		
	Ridership	Capacity	Utili- zation	Added Trips	Total Ridership	Utili- zation	Added Trips	Total Ridership	Utili- zation
A.M. Peak-Hour¹									
East Bay	40,271	27,486	147%	7	40,278	147%	5	40,276	147%
North Bay	4,176	4,175	100%	6	4,182	100%	4	4,180	100%
South Bay	17,053	21,760	78%	8	17,061	78%	6	17,059	78%
P.M. Peak-Hour²									
East Bay	35,779	28,919	124%	7	35,786	124%	5	35,784	124%
North Bay	4,051	3,905	104%	6	4,057	104%	4	4,055	104%
South Bay	14,416	21,640	67%	8	14,424	67%	6	14,422	67%

NOTES:

¹ Inbound direction (into the City)

² Outbound direction (out of from the City)

SOURCE: AECOM, February 2, 2009; CHS Consulting Group, 2010.

Transit Capacity Analysis

As shown in Table 4.8-8, the proposed project would generate approximately 247 weekday p.m. peak-hour transit trips to the four Muni screenlines. Muni screenlines would continue operating at less than 85 percent capacity utilization under cumulative conditions, and therefore the cumulative impact to Muni screenlines would be less than significant.

The proposed project would generate approximately 21 weekday p.m. peak-hour regional transit trips. The proposed project's contribution to the regional operators that would exceed capacity utilization under cumulative conditions would be less than 1.0 percent. Therefore, the proposed project's contribution to the cumulative capacity utilization exceedances for the regional transit operators would be less than significant.

Conclusion

The cumulative effect would be *less than significant* under both NEPA and CEQA because the proposed project would not make a substantial contribution to transit delay, cumulative impacts to Muni ridership (capacity utilization) would be less than significant, and the project would not considerably contribute to the exceedance of the capacity utilization standards for regional transit providers.

Mitigation: None required.

Proposed Project Variant

The project variant would generate the same amount of weekday p.m. peak-hour Muni and regional transit trips as described for the proposed project. As a result, the variant's contribution to cumulative bus transit delay would be less than considerable. Also, Muni operations would not exceed capacity utilization, and the project's contribution to regional transit operators' capacity utilization exceedances would be less than 1.0 percent. The variant would have *less than significant* cumulative impacts under both NEPA and CEQA.

Mitigation: None required.

Alternative A: Reduced Development / Density Alternative

Bus Transit Delay

The alternative would increase the delay on Muni transit lines, as shown in Table 4.8-7. However, the increase would not constitute more than half of the headway. Therefore, the alternative would not considerably contribute to impacts transit delay.

Transit Capacity Analysis

The Reduced Development/Density Alternative would generate approximately 157 weekday p.m. peak-hour transit trips to the four Muni screenlines (approximately 90 fewer trips than the proposed project), as shown in Table 4.8-8. Muni screenlines would continue operating at less than 85 percent capacity utilization under cumulative conditions, and the cumulative capacity utilization exceedances for Muni operations would therefore be considered less than significant.

The Reduced Development/Density Alternative would generate approximately 15 weekday p.m. peak-hour regional transit trips (approximately six fewer trips than the proposed project). The alternative's contribution to the regional operators that would exceed capacity utilization under cumulative conditions would be less than 1.0 percent; therefore, the alternative's contribution to the cumulative capacity utilization exceedances for the regional transit operators would be less than significant.

The cumulative effect would be *less than significant* under NEPA and CEQA because the alternative would not make a substantial contribution to transit delay, cumulative impacts to Muni ridership (capacity utilization) would be less than significant, and the alternative would not considerably contribute to the exceedance of the capacity utilization standards for regional transit providers.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

The One-for-One Replacement Alternative would not generate any new Muni or regional weekday p.m. peak-hour transit trips throughout the transit network or transit routes therein. The alternative would not contribute to any transit delay or change in capacity utilization for Muni and regional operators and would operate the same as under cumulative (no project) conditions.

The cumulative effect would be *less than significant* under CEQA because the alternative would not make any contribution to transit delay, cumulative impacts to Muni ridership (capacity utilization) would be less than significant, and the alternative would contribute to the exceedance of the capacity utilization standards for regional transit providers.

Mitigation: None required.

Alternative C: No Action Alternative

The No Action Alternative would not generate any new Muni or regional weekday p.m. peak-hour transit trips throughout the transit network or transit routes therein. The alternative would not contribute to any change in capacity utilization for Muni and regional operators and would operate the same as under cumulative (no project) conditions. Therefore, the alternative would result in *no impact* to future transit operations under both CEQA and NEPA.

Mitigation: None required.

4.8.5 Mitigation and Improvement Measures

Mitigation Measure M-TR-6: Prepare Construction Traffic Control Plan.

The project sponsor shall implement the following measure:

To reduce potential delays and conflicts between construction activities and various modes of transportation, the project sponsor and its construction contractor(s) shall prepare a traffic control plan(s) for project construction. The project sponsor and construction contractor(s) shall meet with residents, neighbors, DPW, SFMTA, the Fire Department, SFUSD, Muni Operations, and other City agencies to coordinate feasible measures to reduce transportation conflicts and delays, including temporary transit stop relocations, transit service re-routing, adequate emergency access route(s), and other measures to reduce traffic and transit disruption, pedestrian and bicycle circulation effects, and interference with emergency access during construction of the proposed project. The contractor would be required to comply with the City and County of San Francisco's Regulations for Working in San Francisco Streets, which establish rules and permit requirements so that construction activities can be done safely while minimizing interference with pedestrians, bicyclists, transit, and vehicular traffic.

The coordinated plan shall include measures that address street closures, and ensure safe access to the McLaren Early Education School and all occupied residences. It shall also include, but may not be limited to, the following elements:

- Advisory signs shall be erected several weeks in advance to inform the public of planned street closures in the area. During each construction phase, street closure signs and detour routes shall be posted to direct vehicles to use alternative routes to access the project site.

- Emergency vehicle access shall be maintained to the school and all other occupied units and buildings at all times using the temporary streets, detour routes, and/or flagpersons.
- Construction staging and worker parking shall occur within the 48-acre Sunnydale-Velasco project site.
- The construction contractor shall coordinate with school administrators to ensure safe access to and from the school for students, teachers, and parents at all times. The contractors should inquire as to the school start and dismissal times and schedule construction vehicle trips outside of the peak school drop-off and pick up hours to the extent feasible. If avoiding these hours is infeasible, the construction contractor shall provide additional flaggers during school drop-off and pick-up hours near school.

To the extent applicable, the traffic control plan shall conform to Caltrans's Manual of Traffic Controls for Construction and Maintenance Work Zones.

Mitigation Measure M-CC-TR-1(a): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If LOS at Sunnydale Avenue and Schwerin Street degrades substantially to LOS E, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with SFMTA to add a left-turn pocket at the intersection of Sunnydale Avenue and Schwerin Street on the westbound approach. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.

Mitigation Measure M-CC-TR-1(b): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the southbound left-turn volume at Geneva Avenue and Santos Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with SFMTA to add a left-turn pocket at the intersection of Geneva Avenue and Santos Street on the southbound approach. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.

Mitigation Measure M-CC-TR-1(c): Upon completion of the proposed project, the SFMTA shall regularly monitor vehicular congestion. If the project adds more than 5 percent of the westbound through movement volume at Geneva Avenue and Schwerin Street, and if consistent with the City's goals for a multi-modal transportation network, then the project sponsor shall work with SFMTA to add a right-turn pocket at the intersection of Geneva Avenue and Schwerin Street on the westbound and southbound approaches. The project sponsor, or its successor(s), shall make a fair share contribution of funding for the improvement.

Improvement Measure I-TR-A: The SFMTA could add a left-turn pocket on the northbound approach on Sunnydale Avenue at Persia Street and a right-turn pocket on the eastbound approach on Persia Avenue at Sunnydale Avenue.

Improvement Measure I-TR-B: The SFMTA could add a right-turn pocket on the southbound approach on Brookdale Avenue at Geneva Avenue.

Improvement Measure I-TR-C: The SFMTA could add a right-turn pocket on the southbound approach on Santos Street at Geneva Avenue.

Improvement Measure I-TR-D: The project sponsor could work with Recology, the City's designated trash, recycling, and compost hauler, and with the San Francisco Department of the Environment and the SFMTA's Sustainable Streets Division as master planning proceeds to the schematic design stage for the proposed buildings, to ensure that trash, recycling, and composting facilities are designed to ensure maximum diversion of trash from the City's landfill and that the collection bins are stored in such locations to maximize efficiency in container pickup and minimize traffic disruption during collection.

Improvement Measure I-CC-TR: The project sponsor could work with SFMTA to prohibit left turns at the intersection of Geneva Avenue and Brookdale Avenue by installing raised pavement markers.

Impacts of Mitigation Measures and Improvement Measures

Implementation of the above-identified measures would not result in additional environmental effects, with the exception of Mitigation Measures M-CC-TR-1(b) and M-CC-TR-1(c). As stated above, signal timing adjustments would be infeasible due to coordinated signal timing on Geneva Avenue, where changes in signal timing at one intersection could result in new impacts at another intersection.

4.9 Noise

This section presents the regulatory context for the noise analysis including HUD's noise criteria for new housing construction. Calculations for the noise levels discussed in the impact analysis are provided in **Appendix NO** and summarized below.

4.9.1 Regulatory Framework

Federal

HUD Noise Abatement and Control

The U.S. Department of Housing and Urban Development (HUD) environmental noise regulations are set forth in 24 CFR, Part 51, Subpart B, Noise Abatement and Control. According to the regulations, "It is HUD's general policy to provide minimum national standards applicable to HUD programs to protect citizens against excessive noise in their communities and places of residence."¹ These regulations include criteria for assessing whether a HUD project is suitable for a particular site, given the exterior background noise levels. HUD has defined the suitability of a site for new housing construction based on existing exterior noise levels as follows:

- Acceptable—65 dB day-night average sound level (DNL) or less;
- Normally unacceptable—Exceeding 65 dB DNL but not exceeding 75 dB DNL; and
- Unacceptable—Exceeding 75 dB DNL.

The HUD regulations also include a goal (not a standard) that interior noise levels not exceed 45 dB DNL.² Sound attenuating features, such as barriers or sound attenuating building materials, shall be used to achieve the interior noise goal where feasible. Standard building construction generally provides 20 dB DNL of sound attenuation³; therefore, if the exterior noise environment is classified as "acceptable," according to HUD standards, the interior noise environment should not exceed 45 dB DNL. The HUD regulations also encourage the use of quieter construction equipment and methods.⁴

Federal Aviation Administration

The Federal Aviation Administration (FAA) develops noise exposure maps that use average annual DNL noise contours around the airport as the primary noise descriptor. The FAA states that all land uses are considered compatible when aircraft noise effects are less than 65 decibels (dB) DNL. San Francisco International Airport is approximately 6 miles south and Oakland International

¹ HUD, Noise Abatement and Control, 24 CFR, Part 51, Subpart B.

² 24 CFR, Section 51.103(c)

³ HUD, The Noise Guidebook, March 2009, p.14

⁴ 24 CFR, Section 51.101(7)

Airport is approximately 10 miles east of the project site. The project site is outside the 55 dB CNEL noise contour of both airports.⁵

State

California Building Code

The *California Building Code* (*California Code of Regulations*, Title 24, Part 2, Section 1207) establishes material requirements in terms of sound transmission class (STC) ⁶ of 50 for all common interior walls and floor/ceiling assemblies between adjacent dwelling units or between dwelling units and an adjacent public area.

Regional and Local

San Francisco General Plan

The Environmental Protection Element of the *San Francisco General Plan* contains the following objectives and policies relevant to noise and new development:

Objective 10: Minimize the impact of noise on affected areas.

Policy 10.1: Promote site planning, building orientation and design, and interior layout that will lessen noise intrusion.

Policy 10.2: Promote the incorporation of noise insulation materials in new construction.

Objective 11: Promote land uses that are compatible with various transportation noise levels.

Policy 11.1: Discourage new uses in areas in which the noise level exceeds the noise compatibility guidelines for that use. The Land Use Compatibility Chart for Community Noise included in Policy 11.1 specifies the compatibility of different land use types within a range of ambient noise levels.

For residential uses:

- Noise exposure is considered satisfactory, with no special noise insulation requirements where the DNL is 60 dBA or less.
- New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in the design where the DNL is between 60 dBA and 70 dBA.
- New construction or development should generally be discouraged where DNL is over 65 dBA. If new construction or development does proceed, a

⁵ San Francisco International Airport, Aircraft Noise Abatement Office, Mapping Tools, Internet Web Site: http://www.flyquietsfo.com/mapping_tools.asp, Accessed April 19, 2011, and Oakland International Airport, Fourth Quarter 2008 Noise Contours. Internet website: http://www2.oaklandairport.com/noise/pdfs/2008_Annual_Noise_Contour_Map.pdf, accessed April 27, 2011, March 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ The STC is used as a measure of a materials ability to reduce sound. The STC is equal to the number of decibels a sound is reduced as it passes through a material.

detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

For other noise-sensitive uses (i.e., schools, libraries, churches, hospitals, nursing homes):

- Noise exposure is considered satisfactory, with no special noise insulation requirements where the DNL is 65 dBA or less.
- New construction or development should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features included in the design where the DNL is between 62 dBA and 70 dBA.
- New construction or development should generally not be undertaken where DNL is more than 65 dBA.

For playgrounds, parks and similar outdoor uses, noise exposure is considered satisfactory, where the DNL is 70 dBA or less.

Policy 11.3: Locate new noise-generating development so that the noise impact is reduced.

San Francisco Noise Ordinance (Article 29, San Francisco Police Code)

The San Francisco Noise Ordinance specifically recognizes that adverse effects on a community can arise from noise sources, such as transportation, construction, mechanical equipment, entertainment, and human and animal behavior. The Noise Ordinance (Article 29, *San Francisco Police Code*, Section 2900) states:

It shall be the policy of San Francisco to maintain noise levels in areas with existing healthful and acceptable levels of noise and to reduce noise levels, through all practicable means, in those areas of San Francisco where noise levels are above acceptable levels as defined by the World Health Organization's Guidelines on Community Noise.

The following Noise Ordinance provisions address and limit disruptive noise intrusions.

Construction (Sections 2907 and 2908)

The Noise Ordinance states that construction equipment shall not emit noise in excess of 80 dBA when measured at a distance of 100 feet, or at an equivalent sound level at some other convenient distance. This noise level limit is not applicable to impact tools and equipment that contain manufacturer-recommended noise-attenuating intake and exhaust mufflers, or to pavement breakers and jackhammers equipped with manufacturer-recommended acoustically attenuating shields or shrouds, approved by the DPW or DBI.

Noise Limits (Section 2909)

Section 2909 establishes a not-to-exceed noise standard for fixed sources of noise, such as building mechanical equipment and industrial or commercial processing machinery. The standards in Section 2909(a), (b), and (c) are applicable outdoors, at the property line of the affected use, and vary based on the residential or commercial nature of the noise generator's use. For residential properties, the noise limits are 5 dBA above the ambient level at any point outside of the property plane of a residential use. The noise limits for public property provide that no person shall produce

a noise level more than 10 dBA above the local ambient level at a distance of 25 feet or more on public property.

The Noise Ordinance also limits interior noise from a fixed source (e.g., machinery, mechanical equipment) from causing the noise level measured inside any sleeping or living room in any dwelling unit located on residential property to 45 dBA between the hours of 10:00 p.m. to 7:00 a.m. or 55 dBA between the hours of 7:00 a.m. to 10:00 p.m. with windows open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

4.9.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For noise and vibration the analysis considers whether the proposed project or alternatives would:

- Expose residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation;
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels;
- Generate construction noise that would not comply with local standards; or
- Result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors.

Significance Criteria under CEQA

The project and alternatives would have a significant adverse noise impact if it would:

- Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, expose people residing or working in the area to excessive noise levels;
- For a project located in the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels; or
- Be substantially affected by existing noise levels.

The proposed project would not be located within an airport land use plan area. San Francisco International Airport is approximately 6 miles south, and Oakland International Airport is approximately 10 miles east, of the project site. The project site is outside the 55 dB CNEL noise contour of both airports.⁷ Consequently the proposed project would have *no impact* under CEQA with regard to exposure of people residing or working in the area to excessive noise levels from airport operations. Also, the proposed project would not be located in the vicinity of a private airstrip. There are four private airstrips, all helipads, within San Francisco and none in Daly City or Brisbane.⁸ All four helipads are located 3 or more miles away from the project site and would not impact the noise environment of the project site. Consequently, the proposed project would have *no impact* under CEQA with regard to exposure of people residing or working in the area to excessive noise levels from a private airstrip in the vicinity. These criteria will not be discussed further.

Construction Noise Impacts

To assess potential construction noise impacts, sensitive receptors and their relative exposure (considering topographic barriers and distance) were identified. Combined intermittent noise levels from the simultaneous operation of onsite equipment expected to be used in project construction were estimated based on equipment noise data published by the Federal Highway Administration. The sources assessed were identified by the applicant's contractor as likely equipment to be used in the project.

Proposed construction activities would be required to comply with the San Francisco Noise Ordinance, which prohibits construction activities between 8:00 p.m. and 7:00 a.m. and limits noise from any individual piece of construction equipment, except impact tools approved by the DPW, to 80 dBA at 100 feet. As long as construction activities that would occur under the proposed project comply with the noise ordinance, construction noise impacts from non-impact equipment would be considered less than significant. If construction activities using non-impact equipment would exceed these standards, then mitigation measures would be required. The San Francisco Noise Ordinance does not identify any quantitative standard for impact equipment.

To determine if the proposed project would result in a substantial temporary increase in noise levels in the project vicinity above levels existing without the project, persistent construction equipment noise related to an increase of 10 dBA over the existing ambient noise level would represent a perceived doubling of loudness and is considered a substantial temporary increase in noise levels warranting implementation of construction noise control measures.

⁷ San Francisco International Airport, Aircraft Noise Abatement Office, Mapping Tools, Internet Web Site: http://www.flyquietsfo.com/mapping_tools.asp, Accessed April 19, 2011, and Oakland International Airport, Fourth Quarter 2008 Noise Contours. Internet website: http://www2.oaklandairport.com/noise/pdfs/2008_Annual_Noise_Contour_Map.pdf, accessed April 27, 2011, March 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ Aviation Acres website, accessed April 26, 2013. Available at: <http://www.aviationacres.com/california.asp?CMD=AirportDetail&ID=2407>. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Operational Noise Impacts

Operational noise evaluated in this section include (1) noise generated by redistribution of automobile and bus traffic that would result from reconfigured roadways and the addition of project traffic; and (2) compatibility of potential future uses with HUD noise exposure standards and the San Francisco Land Use Compatibility Guidelines for Community Noise and other *General Plan* policies. Traffic noise modeling was completed using the HUD's *Day/Night Noise Level Assessment Tool*.

Traffic noise level significance is determined by comparing the noise levels to the Land Use Compatibility Guidelines for Community Noise and by comparing the increased traffic noise levels to the Federal Interagency Committee on Noise (FICON) significance recommendations, which assess the annoyance effects of changes in ambient noise levels resulting from aircraft operations. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, they may be applied to other transportation sources of noise described in terms of cumulative noise exposure metrics such as the DNL. FICON significance recommendations indicate that an increase in noise of 3 dBA or more is clearly perceptible and indicates the need for further analysis, and potentially mitigation, of noise effects, even where resulting noise levels are below 65 dBA. While FICON also suggested that, if noise levels that are above 65 dBA were to increase by 1.5 dBA or more, then further analysis should be done in the 60-65 dBA range, this relates to aircraft noise specifically for which noise abatement contours are developed for 65 dB. Consequently this analysis applies a 3 dBA increase (the barely perceptible limit for human hearing outside of the laboratory) as the threshold for assessing traffic noise impacts.

Vibration Impacts

There are no adopted state or local policies or standards for groundborne vibration. However, the federal transit administration (FTA) has published guidance relative to vibration impacts for both construction and exposure to rail transit and this guidance is commonly applied to assess potential vibration impacts from these sources. The average person is quite sensitive to ground motion, and levels as low as 0.02 inch per second can be detected by the human body when background noise and vibration levels are low. Vibration intensity is expressed as peak particle velocity (PPV), the maximum speed at which the ground moves while it temporarily shakes. Since groundshaking speeds are very slow, PPV is measured in inches per second. According to the FTA, non-engineered timber and masonry buildings can be exposed to groundborne vibration PPV levels of up to 0.2 inch per second (in/sec) without experiencing structural damage.⁹ Caltrans recommends that extreme care be taken when sustained pile driving occurs within 25 feet of any building, or within 50 to 100 feet of a historic building or a building in poor condition.¹⁰

⁹ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, available online: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf, May 2006.

¹⁰ Caltrans, *Transportation Related Earthborne Vibrations (Caltrans Experiences)*, Technical Advisory, Vibration TAV-02-01-R9601, February 20, 2002.

Groundborne vibration from construction activities that involve “impact activities,” primarily pile driving and use of a hoe ram to break concrete, could produce detectable or significant vibration at nearby sensitive buildings and sensitive receptors unless proper mitigation is followed.

Proposed Project

Impact NO-1: Noise Effects in Excess of Established Standards

NEPA: The proposed project would generate construction noise that would not comply with local standards and would result in exposure of residents of public housing to background noise levels that exceed HUD’s acceptable noise level of 65 dB DNL without attenuation. (Less than Significant with Mitigation)

CEQA: The proposed project would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels. (Less than Significant with Mitigation)

Construction

Neither the HUD Noise Guidebook nor the *San Francisco General Plan* address or establish restrictions on or standards for construction-related noise. Consequently, construction noise impacts are assessed relative to the restrictions of the City’s Noise Ordinance codified in Sections 2907 and 2908 of the *Police Code*.

Table 4.9-1 presents a list of construction equipment for each construction phase as provided by the project applicant’s construction contractor.¹¹ A combined noise level was then estimated assuming equipment most likely to be operating simultaneously in each phase.

The City’s Noise Ordinance states that construction equipment shall not emit noise in excess of 80 dBA when measured at a distance of 100 feet, or at an equivalent sound level at some other convenient distance. This limit corresponds to 86 dBA at a distance of 50 feet for the purposes comparison to the (non-combined) values in Table 4.9-1. As can be seen in the table, the only piece of equipment with the potential to exceed the noise ordinance standard would be the concrete saw. However, the noise ordinance further states that the noise level limit is not applicable to pavement breakers and jackhammers equipped with manufacturer-recommended acoustically attenuating shields or shrouds that are approved by the Department of Public Works or the Department of Building Inspection. Without the use of acoustic shields or shrouds, or other noise-reduction measures, construction equipment would exceed the noise ordinance standard, which would be a significant impact. Therefore, consistency with this provision is ensured through adoption of **Mitigation Measure M-NO-1a**.

¹¹ Construction Resources Management (CRM) Data Request Response to Environmental Science Associates, November 7, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

**TABLE 4.9-1
MAXIMUM OFF-ROAD CONSTRUCTION EQUIPMENT NOISE LEVELS**

Construction Phase	Loudest Construction Equipment	Equipment Noise Level at 50 feet (dBA)	Combined Noise Level at 50 feet (dBA)
Demolition	Excavator End Dump Truck Track Loader	81 76 79	84
Rough Excavation	Bulldozer Scraper Compactor Motor Grader	82 84 80 85	86 ^a
Building Excavation	Excavator Bulldozer	81 82	84
Focused Excavation (footing sidewalks)	Excavator Backhoe Roller Skip Loader Vibrating Plates	81 78 80 79 83	84 ^b
Street Grading	Motor Grader Roller Skip Loader Vibrating Plates	85 80 79 83	86 ^c
Foundation Construction	Lift Vibrating Plates Mobile Crane Concrete Saw Concrete Pump Truck	75 83 81 90 81	91 ^d
Framing	Lift Mobile Crane	75 81	82
Pavement Application	Paver Roller Concrete Saw Vibrating Plates	77 80 90 83	91 ^d

NOTES:

^a Assumes simultaneous operation of bulldozer and scraper in a single area during material removal activities or simultaneous operation of motor grader and compactor during leveling activities.

^b Assumes simultaneous operation of vibrating compactor and roller as worst case scenario for leveling activities.

^c Assumes simultaneous operation of loader and motor grader as worst case scenario.

^d Assumes simultaneous operation of concrete saw and vibrating plate as worst case scenario.

SOURCE: FHWA, Roadway Construction Noise Model User's Guide, 2006; Construction Resource Management, 2012.

As indicated in Table 4.9-1 construction activities of up to 91 dBA at 50 feet could result in a substantial temporary increase in ambient noise levels in the project vicinity above existing conditions, which were monitored to be 64 to 74 dBA during daytime hours. Consequently, **Mitigation Measure M-NO-1a** is identified to reduce construction noise levels as reasonably feasible. Because construction activities would occur during the daytime and involve standard construction equipment, implementation of these noise-reducing mitigations is sufficient to reduce this impact to less than significant with mitigation.

Operation

HUD standards consider 65 dB DNL as an acceptable background noise level for new residential developments. This standard is based on maintaining an interior noise level of 45 dB DNL and assumes that standard building construction methods result in an exterior to interior noise reduction of 20 dB. Traffic noise levels were calculated for the existing setting and the existing setting plus traffic from the proposed project and are presented in **Table 4.9-2**. As can be seen from the table, modeled roadway noise exceeds the HUD noise exposure standard of 65 DNL for residential land uses under existing, existing plus project, and 2030/2040 plus project conditions. Output from the HUD *Day/Night Noise Level Assessment Tool* indicates that predicted DNL is dominated by noise from “heavy trucks” (in this case, SF MUNI buses) and that the noise from automobiles and medium trucks makes no meaningful contribution to predicted noise levels. Because modeling uses a number of conservative assumptions, such as treating buses as heavy trucks, noise monitoring was conducted to more accurately characterize the existing noise environment. These data are also presented in Table 4.9-2.

**TABLE 4.9-2
CALCULATED PROJECT SITE TRAFFIC NOISE LEVELS**

Location	DNL (Modeled/Monitored)
Existing	
Sunnydale Avenue west of Hahn Street	72.5/64.7
Santos Street north of Velasco Avenue	74.9/73.7
Existing Plus Project	
Sunnydale Avenue west of Hahn Street	72.5
Santos Street north of Velasco Avenue	74.9
2030/2040 Plus Project	
Sunnydale Avenue west of Hahn Street (2040)	72.7
Santos Street north of Velasco Avenue (2030) *	74.9

Calculations incorporated a 30 foot residential setback from the roadway center.

DNL = day-night average sound level

* As further explained in Section 4.8, cumulative trip generation was analyzed in both year 2030 and 2040. For this segment of roadway, the 2030 cumulative trip generation was higher, so that it was used in this noise analysis.

Modeled roadway noise from Santos Street reasonably reflects monitored conditions, while monitored data from Sunnydale Avenue appear to overestimate resultant noise levels. Notwithstanding these differences, data (both modeled and monitored) indicate that roadway noise along Santos Street would exceed the 65 DNL standard of HUD, which would be a substantial adverse impact of the proposed project.

With regard to outdoor noise exposure for open spaces, the City’s normally acceptable land use compatibility standard for playground and parks is 70 dB DNL. As indicated in Table 3.9-2, monitored noise levels on the site range from 65 dB DNL to as high as 74 dB DNL along

Santos Street. Consequently, exterior noise exposure in some outdoor spaces could exceed the City's *General Plan* compatibility standard.

These noise levels would also exceed the exposure standard of Policy 11-1 of the *San Francisco General Plan* Environmental Protection Element, shown in the Regulatory Setting, above. This would be a significant impact. Implementation of **Mitigation Measures M-NO-1b** and **M-NO-1c**, which would require final designs to meet an interior noise level of 45 dBA DNL and residential open space noise levels to achieve 70 dBA to the extent feasible, are identified to reduce this impact to a less than significant level.

It should be noted that the proposed project is subject to Title 24 (*Building Code*) Noise Insulation requirements and the San Francisco Noise Ordinance, and therefore must demonstrate how dwelling units have been designed to meet the applicable interior noise standards. As the proposed project would demolish structures built prior to implementation of current noise standards and reconstruct them with newer materials, the opportunity exists for the proposed project to reduce interior noise exposure to existing residences of the community. Consequently, the implementation of Mitigation Measures M-NO-1b and M-NO-1c would further reduce this impact regarding interior noise exposure levels over existing conditions.

The impact would be *less than significant with mitigation* under NEPA because the proposed project would generate construction noise that would not comply with local standards, as well as result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable exterior noise level of 65 dB DNL without attenuation, but this impact would be reduced to less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c.

The impact would be *less than significant with mitigation* under CEQA because the proposed project would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels, but this impact would be reduced to less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses.

Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.

Impact NO-2: Vibration Effects

NEPA: The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

CEQA: The proposed project would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction

The types of construction activities associated with propagation of ground-borne vibration include pile driving, blasting, use of hoe-rams for demolishing large concrete structures and caisson drilling. None of these activities would be needed to construct the proposed project. Of the standard construction equipment types presented in Table 4.9-2, a bulldozer would have the greatest potential to generate vibration. A bulldozer generates vibration levels of 0.089 in/sec at a distance of 25 feet.¹² This estimated vibration level would be well below the FTA threshold of 0.20 in/sec resulting in a less than significant impact with regard to groundborne vibration.

Operation

The residential uses of the proposed project would not result in the generation of groundborne vibrations which are typically associated with rail operations in an urban setting. The proposed project is located more than 1 mile from the nearest rail operations, and residential uses would not be affected by vibration from the rail. No other sources of vibration at the project site have been identified. Therefore, the project would have a less than significant impact with regard to exposure of people to excessive groundborne vibration.

The impact would *be less than significant* under NEPA because the proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

The impact would be *less than significant* under CEQA because the proposed project would not result in exposure of persons to the generation of excessive groundborne vibration or groundborne noise levels.

Mitigation: None required.

¹² Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May, 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Impact NO-3: Permanent Noise Level Effects

NEPA: The proposed project would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors. (Less than Significant)

CEQA: The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)

The proposed project would generate increased roadway traffic, which would result from a combination of new vehicle trips associated with increased residential density and a reconfigured roadway network. Net new daily trips added to the roadway network are anticipated to be 4,425. As shown in Table 4.9-3, noise levels with the project in year 2030 along Santos Street and year 2040 along Sunnydale Avenue would increase by 0.1 dBA at most, compared to existing conditions. This marginal increase would be below the threshold of human perception of a 3 dB increase outside of a laboratory.¹³ Consequently, permanent increases in roadway noise would be a less than significant impact.

The only stationary source of noise proposed as part of the project would be the back-up diesel generator which would be operated weekly for an hour or less, as well as any required heating, ventilation, and air-conditioning (HVAC) equipment. This generator would be located in a building to be used for senior housing and retail mixed-use, at the northeast corner of the project site. While the generator would be permanently installed, diesel engine operations associated with the back-up generator would be intermittent and conducted during daytime hours; typically, such backup generators are operated for testing for approximately one hour per week. Both generators and any HVAC equipment would be subject to Article 29 Section 2909 of the *City Police Code* which for residential properties, restricts the noise generation to 5 dBA above the ambient level at any point outside of the property plane of a residential use. Consequently, permanent increases in stationary source noise would be a less than significant impact.

The impact would be *less than significant* under NEPA because the proposed project would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors.

The impact would be *less than significant* under CEQA because the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Mitigation: None required.

¹³ Caltrans, Technical Noise Supplement, 2009.

Proposed Project Variant

The project variant would maintain the same building envelope (i.e., same number of buildings in approximately the same size and configuration) as the proposed project. Consequently, construction-related vibration of the variant would be largely the same as the proposed project, and would be *less than significant* under both CEQA and NEPA.

The marginal reduction in the number of residential units would result in little, if any, reduction in the construction-related noise impacts to surrounding residences addressed in Impact NO-1. From an operational standpoint, the transportation analysis concludes that the project variant would generate the same number of net new vehicle trips as the proposed project, as well as distribute and assign these trips as described for the proposed project. Therefore, implementation of the project variant would result in *less than significant with mitigation* impacts under NEPA because the variant would generate construction noise that would not comply with local standards, as well as result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable exterior noise level of 65 dB DNL without attenuation.

Implementation of the project variant would result in *less than significant with mitigation* impacts under CEQA because it would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels. These impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure M-NO-1a, M-NO-1b, and M-NO-1c.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses.

Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.

With regard to permanent noise levels, implementation of the project variant would result in a *less-than-significant* impact, under both CEQA and NEPA because it would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Alternative A: Reduced Development / Density Alternative

Impact A-NO-1: Noise Effects in Excess of Established Standards

NEPA: The Reduced Development / Density Alternative would generate construction noise that would not comply with local standards and would result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels. (Less than Significant with Mitigation)

Construction

Although the alternative would involve construction of fewer units, the construction equipment used for the Reduced Development/Density Alternative would be the same as that presented in Table 4.9-2. Consequently, the magnitude of construction noise would be the same as those shown in Table 4.9-2. Without the use of acoustic shields or shrouds, construction equipment would exceed the noise ordinance standard, which would be a significant impact. Consistency with the requirement that concrete saws are equipped with manufacturer-recommended acoustically attenuating shields or shrouds that are approved by the Department of Public Works or the Department of Building Inspection would be ensured through adoption of **Mitigation Measure M-NO-1a**. This mitigation measure would also reduce the overall increase in construction noise levels.

As indicated in Table 4.9-1 construction activities of up to 91 dBA at 50 feet could result in a substantial temporary increase in ambient noise levels in the project vicinity above existing conditions which were monitored to be 64 to 74 dBA during daytime hours. Consequently, **Mitigation Measure M-NO-1a** is identified to reduce construction noise levels as reasonably feasible. Because construction activities would occur during the daytime and involve standard construction equipment, implementation of these noise-reducing mitigations is sufficient to reduce this impact to less than significant with mitigation.

Operation

Traffic noise levels were calculated for the existing setting and the existing setting plus traffic from the Reduced Development/Density Alternative and are presented in **Table 4.9-3**. Although the Reduced Development / Density Alternative would result in a lower trip generation than the proposed project, as can be seen from the table, modeled roadway noise exceeds the HUD noise exposure standard of 65 DNL for residential land uses.

**TABLE 4.9-3
CALCULATED PROJECT SITE TRAFFIC NOISE LEVELS**

Location	DNL (Modeled/Monitored)
<i>Existing</i>	
Sunnydale Avenue Ave west of Hahn Street	72.5/64.7
Santos Street north of Velasco Avenue	74.9/73.7
<i>Existing Plus Reduced Density Alternative</i>	
Sunnydale Avenue Ave west of Hahn Street	72.5
Santos Street north of Velasco Avenue	74.9
<i>2030/2040 Plus Reduced Density Alternative</i>	
Sunnydale Avenue Ave west of Hahn Street (2040)	72.7
Santos Street north of Velasco Avenue (2030) *	74.9

Calculations incorporated a 30 foot residential setback from the roadway center.

DNL = day-night average sound level

* As further explained in Section 4.8, cumulative trip generation was analyzed in both year 2030 and 2040. For this segment of roadway, the 2030 cumulative trip generation was higher, so that it was used in this noise analysis

Both modeled and monitored noise levels indicate that roadway noise along Santos Street would exceed the 65 DNL standard of the HUD and would be a substantial adverse impact of the Reduced Development/Density Alternative. These noise levels would also exceed the exposure standard of Policy 11-1 of the City of San Francisco *General Plan* Noise Element, thus requiring acoustical insulation. Consequently, Mitigation Measures M-NO-1a and M-NO-1b are identified to reduce this impact to a less than significant level.

Similar to the proposed project, the Reduced Development/Density Alternative would be subject to Title 24 (*Building Code*) Noise Insulation requirements. The opportunity exists for the Reduced Development/Density Alternative to reduce interior noise exposure to existing residences of the community. Consequently, the implementation of Mitigation Measures M-NO-1a and M-NO-1b would result in a net beneficial impact to interior noise exposure levels over existing conditions.

The impact would be *less than significant with mitigation* under NEPA because the alternative would generate construction noise that would not comply with local standards and result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation, but this impact would be reduced to a less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c, which would require final designs to meet an interior noise level of 45 dBA DNL and residential open space noise levels to achieve 70 dBA to the extent feasible.

The impact would be *less than significant with mitigation* under CEQA because the alternative would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project

vicinity above levels existing without the project; and be substantially affected by existing noise levels, but this impact would be reduced to less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c.

Mitigation Measure M-NO-1a: Construction Specifications Mitigation to Reduce Noise Levels During Construction.

Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses.

Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.

Impact A-NO-2: Vibration Effects

NEPA: The Reduced Development / Density Alternative would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. (Less than Significant).

CEQA: The Reduced Development / Density Alternative would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction

The types of construction activities associated with the Reduced Development / Density Alternative would be the same as those associated with the proposed project. The greatest potential to generate vibration would come from a bulldozer, which generates vibration levels of 0.089 in/sec at a distance of 25 feet.¹⁴ The estimated vibration levels associated with construction would be well below the Federal Transit Administration (FTA) threshold of 0.20 in/sec, resulting in a less than significant impact with regard to groundborne vibration.

Operation

The residential uses of the Reduced Development/Density Alternative would not result in the generation of groundborne vibrations, which are typically associated with rail operations in an urban setting. The Reduced Development/Density Alternative would be in the same location as the proposed project site, which is more than 1 mile from the nearest rail operations that would generate groundborne vibration. No other sources of vibration at the project site have been identified. Residential uses would not be affected by vibration from rail operations.

The impact would be *less than significant* under NEPA because the alternative would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

The alternative would have a *less than significant* impact under CEQA with regard to exposure of people to excessive groundborne vibration or groundborne noise levels.

¹⁴ Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May, 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Mitigation: None required.

Impact A-NO-3: Permanent Noise Level Effects

NEPA: The Reduced Development / Density Alternative would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (Less than Significant)

Noise sources associated with the Reduced Development/Density Alternative would be increased due to roadway traffic resulting from a combination of new vehicle trips associated with increased residential density and a reconfigured roadway network. Net new daily trips added to the roadway network would be 3,183. As shown in Table 4.9-3, noise levels with the Reduced Development/Density Alternative in year 2030 along Santos Street and year 2040 along Sunnydale Avenue would not measurably increase compared to existing conditions. Consequently, permanent increases in roadway noise would be a less than significant impact.

Similar to the proposed project, the only stationary sources of noise proposed as part of the Reduced Development/Density Alternative would be the back-up diesel generator which would be operated weekly for an hour or less, as well as any required HVAC equipment. While the generator installation would be permanent, diesel engine operations associated with the back-up generator would be intermittent and conducted during daytime hours. Both generators and any HVAC equipment would be subject to Article 29 Section 2909 of the *City Police Code* which for residential properties, restricts the noise generation to 5 dBA above the ambient level at any point outside of the property plane of a residential use.

Consequently, the impact would be a *less than significant* impact under NEPA because the alternative would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors.

The impact would be *less than significant* under CEQA because the alternative would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-NO-1: Noise Effects in Excess of Established Standards

NEPA: The One-for-One Replacement Alternative would generate construction noise that would not comply with local standards and would result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels. (Less than Significant with Mitigation)

Construction

Although this alternative would result in an overall shorter construction period, the construction equipment used for the One-for-One Replacement Alternative would be the same as that presented in Table 4.9-1. Consequently, the proposed construction equipment list would be consistent with City of San Francisco noise ordinance restrictions, provided that concrete saws are equipped with manufacturer-recommended acoustically attenuating shields or shrouds that are approved by the Department of Public Works or the Department of Building Inspection. Without the use of acoustic shields or shrouds, construction equipment would exceed the noise ordinance standard, which would be a significant impact. Therefore, the requirement that manufacturer-recommended acoustically attenuating shields or shrouds that are approved by the Department of Public Works or the Department of Building Inspection would be ensured through adoption of **Mitigation Measure M-NO-1a**. Moreover, construction would be of a shorter duration under the One-for-One Replacement Alternative than it would under the proposed project or Reduced Development / Density Alternative.

Operation

Traffic noise levels were calculated for the existing setting and the existing setting plus traffic from the One-for-One Replacement Alternative and are presented in **Table 4.9-4**. As can be seen from the table, modeled and measured roadway noise exceeds the HUD noise exposure standard of 65 DNL for residential land uses. These noise levels would also exceed the exposure standard of Policy 11-1 of the City of San Francisco *General Plan* Noise Element. Consequently, Mitigation Measures M-NO-1a and M-NO-1b are identified to reduce this impact to a *less than significant* level.

The One-for-One Replacement Alternative would be subject to Title 24 (*Building Code*) Noise Insulation requirements and therefore must demonstrate how dwelling units have been designed to meet the interior standards. As the One-for-One Replacement Alternative would demolish structures built prior to implementation of Title 24 insulation standards and reconstruct them with newer materials, the opportunity exists for the One-for-One Replacement Alternative to reduce interior noise exposure to existing residences of the community.

**TABLE 4.9-4
CALCULATED PROJECT SITE TRAFFIC NOISE LEVELS**

Location	DNL (Modeled/Monitored)
<i>Existing</i>	
Sunnydale Avenue Ave west of Hahn Street	72.5/64.7
Santos Street north of Velasco Avenue	74.9/73.7
<i>Existing Plus One-for-One Replacement Alternative</i>	
Sunnydale Avenue Ave west of Hahn Street	72.5
Santos Street north of Velasco Avenue	74.9
<i>2030 Plus One-for-One Replacement Alternative *</i>	
Sunnydale Avenue Ave west of Hahn Street	72.5
Santos Street north of Velasco Avenue	74.9

¹ Calculations incorporated a 30 foot residential setback from the roadway center.

DNL = day-night average sound level

* As further explained in Section 4.8, cumulative trip generation was analyzed in both year 2030 and 2040. Given the One-for-One Replacement Alternative would not increase net trip generation, 2030 background volumes, which are generally higher than 2040 background volumes, are used here.

The impact would be *less than significant with mitigation* under NEPA because the alternative would generate construction noise that would not comply with local standards, as well as result in exposure of residents of public housing to background noise levels that exceed HUD's acceptable noise level of 65 dB DNL without attenuation but this impact would be reduced to a less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c.

The impact would be *less than significant with mitigation* under CEQA because the alternative would result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; and be substantially affected by existing noise levels, but this impact would be reduced to less-than-significant level with implementation of Mitigation Measures M-NO-1a through M-NO-1c.

Mitigation Measure M-NO-1a: Construction Document Mitigation to Reduce Noise Levels During Construction.

Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses.

Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.

Impact B-NO-2: Vibration Effects

NEPA: The proposed project would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction

The types of construction activities associated with propagation of ground-borne vibration include pile driving, blasting, use of hoe-rams for demolishing large concrete structures and caisson drilling. Like the proposed project, none of these activities would be needed to construct the One-for-One Replacement Alternative. The construction-related groundborne vibration impact would be less than significant.

Operation

The residential uses of the One-for-One Replacement Alternative would not result in generation of groundborne vibrations, which are typically associated with rail operations in an urban setting. The nearest railroad would be more than 1 mile from the project site, and thus vibration from the railroad would not affect residential uses. No other sources of vibration at the project site have been identified.

The impact would be *less than significant* under NEPA because the alternative would not expose persons to or generate excessive groundborne vibration or groundborne noise levels.

The alternative would have a *less than significant* impact under CEQA with regard to exposure of people to excessive groundborne vibration or groundborne noise levels.

Mitigation: None required.

Impact B-NO-3: Permanent Noise Level Effects

NEPA: The Reduced Development / Density Alternative would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors. (No Impact)

CEQA: The One-for-One Replacement Alternative would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (No Impact)

As discussed in the Transportation Section, there would be no increase in roadway traffic resulting from One-for-One Replacement Alternative. Consequently, there would be no impact associated with roadway noise.

The One-for-One Replacement Alternative would not require a back-up diesel generator and, consequently, although it could require new HVAC equipment, which would be new sources of stationary noise. Both generators and any HVAC equipment would be subject to Article 29 Section 2909 of the *City Police Code* which for residential properties, restricts the noise generation to 5 dBA above the ambient level at any point outside of the property plane of a residential use. Consequently, there would be ***no impact*** under NEPA because the alternative would not result in a substantial permanent increase in ambient noise levels for existing off-site sensitive receptors.

There would be ***no impact*** under CEQA because the alternative would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, no construction or change in existing uses at the project site would occur. There are existing uses at the project site that generate operational noise, such as resident vehicle trips; however, there would be no change to the existing level of activity. Thus, overall noise-related effects from the No Action Alternative would be ***less than significant*** under both CEQA and NEPA.

4.9.3 Cumulative Impacts

Impact CC-NO: Cumulative Noise Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse noise impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse noise impacts. (Less than Significant)

Tables 4.9-2, 4.9-3 and 4.9-4 present cumulative analysis year (2030 and 2040) noise levels at the project site from the proposed project and each of the alternatives, respectfully. These noise levels take into account cumulative traffic increases and roadway reconfigurations, including the extension of Geneva Avenue to Highway 101.

As shown in these tables, noise levels with the project in year 2030 along Santos Street and Sunnydale Avenue would increase by 0.1 dBA at most, compared to existing conditions. This

marginal increase would be below the threshold of human perception.¹⁵ Consequently, permanent increases in roadway noise would be a *less than significant* impact.

The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would result in *less-than-significant* noise impacts under NEPA.

The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would result in *less-than-significant* noise impacts under CEQA.

4.9.4 Mitigation Measures

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

The project sponsor shall incorporate the following practices into the construction specifications documents to be implemented by the project contractor:

- Provide enclosures and mufflers for stationary equipment, shrouding or shielding for impact tools, and barriers around particularly noisy operations, such as grading or use of concrete saws within 50 feet of an occupied sensitive land use.
- Use construction equipment with lower (less than 70 dB) noise emission ratings whenever possible, particularly air compressors and generators.
- Do not use equipment on which sound-control devices provided by the manufacturer have been altered to reduce noise control.
- Locate stationary equipment, material stockpiles, and vehicle staging areas as far as practicable from sensitive receptors.
- Prohibit unnecessary idling of internal combustion engines.
- Require applicable construction-related vehicles and equipment to use designated truck routes to access the project site. Construction traffic should be routed along Geneva Avenue, Brookdale Avenue and Santos Street and should be managed to avoid peak periods.
- Implement noise attenuation measures to the extent feasible (i.e., such that they do not impede efficient operation of equipment or dramatically slow production rates), which may include, but are not limited to, noise barriers or noise blankets. The placement of such attenuation measures shall be reviewed and approved by the Director of Public Works prior to issuance of development permit for construction activities.
- Designate a Noise Disturbance Coordinator who shall be responsible for responding to complaints about noise during construction. The telephone number of the Noise Disturbance Coordinator shall be conspicuously posted at the construction site and shall be provided to the City. Copies of the construction schedule shall also be posted at nearby noise-sensitive areas.

¹⁵ Caltrans, *op cit.*

Mitigation Measure M-NO-1b: Noise Reduction Building Strategies for Residential Uses

For new residential development located along Sunnydale Avenue and Santos Street, the Planning Department and Department of Building Inspection shall require the sponsor to use building materials sufficient to maintain an interior noise level of 45 dBA DNL. The determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable interior noise level can be met. There are a number of measures that could be implemented to achieve this standard. Some examples include:

- Installation of forced-air ventilation and sound rated construction materials.
- Installation of noise insulation features such as stucco-sided walls with resilient furring elements and sound-rated windows and doors.

Mitigation Measure M-NO-1c: Noise Minimization for Residential Open Space.

To minimize effects on residential development at the project site, the Planning Department, through its building permit review process and in conjunction with the noise analysis set forth in Mitigation Measure M-NO-1b, shall require that open space required under the *Planning Code* for residential uses be protected, to the maximum feasible extent, from existing ambient noise levels sufficient to maintain an exterior noise level of 70 dBA DNL for outdoor open spaces. The determination of the final specifications shall be completed by a person(s) qualified in acoustical analysis and shall demonstrate with reasonable certainty that the applicable exterior noise level can be met. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.

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4.10 Air Quality

4.10.1 Regulatory Framework

Federal Regulations

The 1970 Clean Air Act (CAA; 42 USC 7401 et. seq.) is a federal law that regulates air emissions. Under the authority of the CAA, the United States Environmental Protection Agency (U.S. EPA) has established national ambient air quality standards (NAAQS) for six air pollutants that are often referred to as criteria pollutants: ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide, suspended particulate matter (PM₁₀ and PM_{2.5}), and lead. The NAAQS are listed in Table 3.10-2 of the Affected Environment Section. The NAAQS are intended to protect public health and welfare by establishing pollutant concentration to which the public can be exposed without adverse health effects. Each state is required to identify areas where ambient air quality does not comply with the NAAQS and to develop and implement State Implementation Plans (SIPs) that detail how the area will comply with the NAAQS. The SIP must be submitted to and approved by U.S. EPA. The CAA prohibits federal assistance to projects that are not in conformance with the SIP.

The status of areas with respect to the NAAQS is categorized as nonattainment (does not meet the NAAQS), attainment (better than the NAAQS), and unclassified. The unclassified designation includes attainment areas that comply with federal standards as well as areas for which monitoring data are lacking. Unclassified areas are treated as attainment areas for most regulatory purposes.

The 1970 Clean Air Act (last amended in 1990) requires that regional planning and air pollution control agencies prepare a regional air quality plan to outline the measures by which both stationary and mobile sources of pollutants will be controlled in order to achieve all standards by the deadlines specified in the act. These ambient air quality standards are intended to protect the public health and welfare, and they specify the concentration of pollutants (with an adequate margin of safety) to which the public can be exposed without adverse health effects. They are designed to protect those segments of the public most susceptible to respiratory distress, including asthmatics, the very young, the elderly, people weak from other illness or disease, or persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollution levels that are somewhat above ambient air quality standards before adverse health effects are observed.

The current attainment status for the SFBAAB, with respect to federal standards, is summarized in Table 4.10-2. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal standards, except for ozone and particulate matter (PM₁₀ and PM_{2.5}), for which standards are exceeded periodically (see Table 4.10-1).

In June 2004, the SFBAAB was designated as a marginal nonattainment area of the national 8-hour ozone standard.¹ U.S. EPA lowered the national 8-hour ozone standard from 0.80 to

¹ "Marginal nonattainment area" refers to those areas where the 4th highest reading over any 24-hour period in the past 3 years exceeds the ... 8-hour national ambient air quality standard for ozone at concentrations of between 0.076 and 0.086 ppm.

0.75 parts per million (ppm) effective May 27, 2008. In April 2012, U.S.EPA designated the Bay Area as a marginal nonattainment region for the 0.75 ppm ozone standard established in 2008.² The SFBAAB is in attainment for other criteria pollutants, with the exception of the 24-hour standards for PM₁₀ and PM_{2.5}, for which the Bay Area is designated as “Unclassified.” “Unclassified” is defined by the Clean Air Act as any area that cannot be classified, on the basis of available information, as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant. The SFBAAB is designated as an attainment area with respect to the federal annual average PM_{2.5} standard.

Section 176(c) of the CAA, also known as the General Conformity Rule, requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the CAA and SIPs. The General Conformity Rule is codified at 40 CFR, Part 51, Subpart W, and Title 40 CFR, Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans. The General Conformity Rule applicability thresholds for the San Francisco Bay Area Air Basin are presented below in **Table 4.10-1**.

**TABLE 4.10-1
GENERAL CONFORMITY RULE DEMINIMIS THRESHOLDS
FOR THE SAN FRANCISCO BAY AREA AIR BASIN**

VOC or ROG (ozone precursor)	100 tons per year
NO _x (ozone precursor)	100 tons per year
PM _{2.5}	100 tons per year
Carbon Monoxide	100 tons per year
SOURCE: U.S. EPA Title 40 CFR, Part 93, 1993	

State Regulations

Although the federal Clean Air Act established national ambient air quality standards, individual states retained the option to adopt more stringent standards and to include other pollution sources. California had already established its own air quality standards when federal standards were established, and because of the unique meteorological problems in California, there is considerable diversity between the state and national ambient air quality standards, as shown in Table 4.10-2. California ambient standards tend to be at least as protective as national ambient standards and are often more stringent.

In 1988, California passed the California Clean Air Act (*California Health and Safety Code* Sections 39600 et seq.), which, like its federal counterpart, called for the designation of areas as attainment or nonattainment, but based on state ambient air quality standards rather than the federal standards. As indicated in Table 4.10-2, the SFBAAB is designated as “nonattainment” for state ozone, PM₁₀, and PM_{2.5} standards. The SFBAAB is designated as “attainment” for other pollutants.

² United States Environmental Protection Agency (U.S. EPA), 2012b, 2008 Ground-level Ozone Standards — Region 9 Final Designations, www.epa.gov/ozonedesignations/2008standards/final/region9f.htm, April 2012.

Toxic Air Contaminants

In 2005, CARB approved a regulatory measure to reduce emissions of toxic and criteria pollutants by limiting the idling of new heavy-duty diesel vehicles. The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour. Buses or vehicles also must turn off their engines upon stopping at a school and must not start their engines more than 30 seconds before departing from a school. Also, state law Senate Bill 352 (SB 352) was adopted in 2003 and limits locating public schools within 500 feet of a freeway or busy traffic corridor (Section 17213 of the *Education Code*; Section 21151.8 of the *Public Resources Code*).

Regional and Local Regulations

Bay Area Air Quality Planning

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM₁₀ standard). The *2010 Bay Area Clean Air Plan* was adopted on September 15, 2010, by the BAAQMD, in cooperation with the Bay Area Metropolitan Transportation Commission (MTC), the Bay Conservation and Development Commission (BCDC), and the Association of Bay Area Governments (ABAG). The *2010 Clean Air Plan* outlines a multi-pollutant approach for addressing ozone, particulate matter, air toxics, and greenhouse gas emission reductions in a single, integrated strategy. The primary objectives of the plan are to improve local and regional air quality, protect public health, and minimize climate change impacts. The *2010 Clean Air Plan* replaces the Bay Area *2005 Ozone Strategy*, adopted in 2006.

The *2010 Clean Air Plan* updates the *2005 Ozone Strategy* in accordance with the requirements of the California Clean Air Act to implement “all feasible measures” to reduce ozone; provide a control strategy to reduce ozone, particulate matter, toxic air contaminants, 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 2010–2012 time frame. The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the MTC, local governments, transit agencies, and others. The *2010 Clean Air Plan* also represents the Bay Area’s most recent triennial assessment of the region’s strategy to attain the state one-hour ozone standard.³

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the SFBAAB. ABAG, MTC, county transportation agencies, cities and counties, and various non-governmental organizations also participate in the efforts to improve air quality through a

³ BAAQMD, *2010 Clean Air Plan*. Available online at <http://www.baaqmd.gov/Divisions/Planning-and-Research/Plans/Clean-Air-Plans.aspx> Accessed on April 15, 2013.

variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. BAAQMD is responsible for attaining and/or maintaining air quality in the region within federal and state air quality standards. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and state standards. The BAAQMD has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The BAAQMD also regulates new or expanding stationary sources of toxic air contaminants and requires air toxic control measures (ATCM) for many sources emitting TACs.

San Francisco Construction Dust Control Ordinance

The *San Francisco Health Code* Article 22B and *San Francisco Building Code* Section 106.A.3.2.6, collectively constitute the Construction Dust Control Ordinance (adopted in July 2008). The ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that 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 the Department of Building Inspection (DBI). For projects over one-half acre, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by the San Francisco Department of Public Health (DPH) prior to issuance of a building permit by the DBI.

Pursuant to *Health Code* Article 22B, Section 1247, all departments, boards, commissions, and agencies of the City of San Francisco that authorize construction or improvements on land under their jurisdiction under circumstances where no building, excavation, grading, foundation or other permits are required to be obtained under the *San Francisco Building Code* shall adopt rules and regulations to ensure that the same dust control requirements that are set forth in this article are followed.

Building permits will not be issued 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. The Construction Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the Director of Public Health.

Dust suppression activities may include watering of 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*. The project site is more than 48 acres in size, and therefore the project sponsor would be required to prepare a Dust Control Plan.

San Francisco Health Code Provisions Regarding Roadway-Generated Pollutants (Article 38)

San Francisco adopted Article 38 of the *San Francisco Health Code* in 2008, requiring an Air Quality Assessment for new residential projects of 10 or more units located in proximity to high-traffic roadways, as mapped by the DPH, to determine whether residents would be exposed to unhealthful levels of PM_{2.5}. The air quality assessment evaluates the concentration of PM_{2.5} from local roadway traffic that could affect a proposed residential development site. If the air quality assessment indicates that the annual average concentration of PM_{2.5} at the site would be greater than 0.2 µg/m³, Health Code Section 3807 requires development on the site to be designed or relocated to avoid exposure greater than 0.2 µg/m³, or a ventilation system to be installed that would be capable of removing 80 percent of ambient PM_{2.5} from habitable areas of the residential units. This City-imposed standard, would be applicable to proposed residential units. Article 38 of the Health Code is in the process of being revised, along with the Administrative Code with adoption expected in late 2014.

4.10.2 Impacts and Mitigation Measures

Context and Intensity Evaluation Guidelines under NEPA

According to HUD regulations 24 CFR, Part 58.5, Subpart A, an environmental analysis of a HUD proposed project must certify that the project complies with the federal Clean Air Act as amended, particularly the General Conformity Rule, conformance with relevant State or Federal Implementation Plans.

Significance Criteria under CEQA

The City considers that implementation of the project could have a potentially significant impact related to air quality if it were to:

- 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.

Approach to Analysis

This section discusses the thresholds that are used to determine whether the project would exceed any of the above significance criteria.

Air Quality Plan

The applicable air quality plan is the BAAQMD's 2010 Clean Air Plan. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines a control strategy to reduce emissions and reduce ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project supports the goals of the Clean Air Plan, includes applicable control measures from the Clean Air Plan, and if the project would not disrupt or hinder implementation of any control measures from the Clean Air Plan. Consistency with this plan is the basis for determining whether the proposed project would conflict with or obstruct implementation of an applicable air quality plan (first bulleted significance criteria above).

Criteria Air Pollutants

The assessment of criteria air pollutant impacts addresses the second and third bulleted significance criteria identified above. As described above under Regulatory Framework, the SFBAAB experiences low concentrations of most pollutants when compared to federal or State standards and is designated as either in attainment or unclassified for most criteria pollutants with the exception of ozone, PM_{2.5}, and PM₁₀, for which these pollutants are designated as non-attainment for either the State or Federal standards. By its very nature regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.⁴

Land use projects contribute to regional criteria air pollutants during the construction and operational phases of a project. **Table 4.10-2** identifies criteria air pollutant significance thresholds. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

The significance thresholds in Table 4.10-2 are based on the state and federal Clean Air Acts' emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_x, the offset emissions level is an annual average of 10 tons per year (or 54 pounds (lbs.) per day).⁵ These levels represent emissions by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

⁴ Bay Area Air Quality Management District, (BAAQMD), CEQA Air Quality Guidelines, May 2010.

⁵ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 17.

**TABLE 4.10-2
CRITERIA AIR POLLUTANT SIGNIFICANCE THRESHOLDS
FOR CONSTRUCTION AND OPERATION**

Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons per year)
Reactive Organic Gases (ROG)	54	54	10
Nitrogen Oxides (NO _x)	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10

SOURCE: Bay Area Air Quality Management District (BAAQMD), 2009. Revised Draft Options and Justification Report, CEQA Thresholds of Significance Air Quality Guidelines, October 2009. Available at www.baaqmd.gov

The federal New Source Review (NSR) program was created by the Federal Clean Air Act to ensure that stationary sources of air pollution are constructed in a manner that is consistent with attainment of federal health based ambient air quality standards. For PM₁₀ and PM_{2.5}, the emissions limit under NSR is 15 tons per year (82 lbs. per day) and 10 tons per year (54 lbs. per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.⁶

Although the regulations specified above apply to new or modified stationary sources, land use development projects result in ROG, NO_x, PM₁₀ and PM_{2.5} emissions as a result of increases in vehicle trips, architectural coating and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects and those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ozone precursors or particulate matter. Operational emissions of criteria pollutants were estimated using the CalEEMod version 2013.2.2 emissions inventory model. This model is a tool developed with the consultation of the California Air Pollution Control Officers Association for the purposes of calculating pollutant emissions and GHGs with respect to CEQA analysis and was adopted by the BAAQMD as the preferred model for CEQA analysis as of August 5, 2013.

Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust.⁷ Individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.⁸ The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.⁹ San Francisco's Construction Dust Control

⁶ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 16.

⁷ Western Regional Air Partnership. 2006. *WRAP Fugitive Dust Handbook*. September 7, 2006. This document is available online at http://www.wrapair.org/forums/dej/fdhd/content/FDHandbook_Rev_06.pdf, accessed February 16, 2012.

⁸ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009, page 27.

⁹ BAAQMD, *CEQA Air Quality Guidelines*, May 2011.

Ordinance requires a number of fugitive dust control measures to ensure that construction projects do not result in visible dust. Compliance with the Construction Dust Control Ordinance is the basis for determining the significance of fugitive dust emissions.

Other Criteria Pollutants

Regional concentrations of carbon monoxide (CO) have not exceeded the California ambient air quality standards in the past 19 years, and sulfur dioxide (SO₂) concentrations have never exceeded the standards. The primary source of CO impacts from land use projects is vehicle traffic. Construction-related SO₂ emissions represent a negligible portion of the total basin-wide emissions, and construction-related CO emissions represent less than 5 percent of the total basin-wide CO emissions.¹⁰ As shown in Table 3.10-2, the SFBAAB is designated as marginal attainment/attainment for both CO and SO₂. Furthermore, BAAQMD has demonstrated that in order to exceed the California ambient air quality standard of 9.0 ppm (8-hour average) or 20.0 ppm (1-hour average) for CO, project traffic in addition to existing traffic would need to exceed 44,000 vehicles per hour at affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is limited; this lower volume is applicable to downtown areas with concentrations of high-rise buildings and is not applicable to the project site). Therefore, SO₂ emissions are not discussed further and CO emissions are assessed based on BAAQMD vehicle screening volumes of 44,000 vehicles per hour.

Local Health Risks

In addition to criteria air pollutants, individual projects may emit TACs. As part of the AQTR, a health risk assessment was conducted for the proposed project to provide quantitative estimates of health risks from exposures to TACs. This analysis is used to determine whether the proposed project would expose sensitive receptors to substantial pollutant concentrations (fourth bulleted significance criteria).

The threshold of significance used to evaluate health risks from new sources of TACs is based on the potential for the proposed project to substantially affect the geography and severity of the Air Pollutant Exposure Zone at sensitive receptor locations. For projects that could result in sensitive receptor locations meeting the Air Pollutant Exposure Zone criteria that otherwise would not without the project, a proposed project that would emit PM_{2.5} concentration above 0.3 µg/m³ or result in an excess cancer risk greater than 10.0 per million would be considered a significant impact. The 0.3 µg/m³ PM_{2.5} concentration and the excess cancer risk of 10.0 per million persons exposed are the levels below which the BAAQMD considers new sources not to make a considerable contribution to cumulative health risks.¹¹ For projects proposing new sensitive uses,

¹⁰ BAAQMD. 2009. *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*. October. p. 27. Available: <<http://baaqmd.gov/~media/Files/%20Planning%20and%20Research/CEQA/Revised%20Draft%20CEQA%20Thresholds%20%20Justification%20Report%20Oct%202009.ashx>>. Accessed: March 3, 2014.

¹¹ BAAQMD, California Environmental Quality Act Guidelines Update, Proposed Air Quality CEQA Thresholds of Significance. May 3, 2010. Available online at http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/Proposed_Thresholds_Report_%20May_3_2010_Final.ashx?la=en. Accessed February 20, 2014.

the threshold of significance used to evaluate exposure to substantial pollutant concentrations is based on whether the project would site these uses within an Air Pollutant Exposure Zone.

The AERMOD (Version 12345) was used for the dispersion analysis. AERMOD is the US EPA preferred dispersion model for general industrial sources. The model can simulate point, area, volume, and line sources. The AERMOD model is the appropriate model for this analysis based on the coverage of simple, intermediate, and complex terrain. It also predicts both short-term and long-term (annual) average concentrations.

Odors

BAAQMD considers a substantial number of odor complaints, specifically, more than five confirmed complaints per year averaged over the past three years¹² as the indication of an odor impact (BAAQMD, 2009).

Cumulative Impacts

As discussed above, in developing potential significance thresholds, BAAQMD recognized that no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant. Therefore, the assessment of direct air quality impacts related to criteria air pollutants represents a cumulative analysis.

Likewise, with respect health risks and hazards, cancer risks in the area from local mobile and stationary sources are combined with project operational and construction-related contributions, assuming a 70-year exposure period, and compared to the cumulative threshold of 100 in one million, which represents a cumulative exposure analysis. Additionally, the proposed project's contribution to localized concentrations of PM_{2.5} is added to the existing concentrations which include ambient PM_{2.5} concentrations and PM_{2.5} emissions from known sources. The cumulative PM_{2.5} concentrations are compared to the City of San Francisco threshold of 10 µg/m³. Therefore, this analysis too represents a cumulative assessment.

Methodology for Analysis of Direct Impacts

An Air Quality Technical Report (AQTR) was prepared for the proposed project and the following analysis relies largely on the information provided in the AQTR, included as **Appendix AQ**.¹³

Direct impacts associated with project construction and operation are analyzed separately. Each of these types of direct impacts are in turn separated into impacts from criteria air pollutant emissions, which are generally regional in nature, and impacts associated with localized health risk due to exposure to toxic air contaminants.

¹² A three-year time frame is used in relation to odor complaints consistent with BAAQMD recommendations.

¹³ ENVIRON and Environmental Science Associates, *Sunnydale-Velasco HOPE-SF Project San Francisco, California Air Quality Technical Report*, June 2014.

The assessment of criteria air pollutant impacts address the second and third bulleted significance criteria identified above. To do this, emissions are compared to the quantitative significance thresholds developed by BAAQMD.

Proposed Project

Impact AQ-1: Criteria Pollutant Impacts During Construction

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction of the proposed project would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant with Mitigation)

Construction activities would result in emissions of ozone precursors and particulate matter in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and particulate matter are primarily a result of the combustion of fuel from on-road and off-road vehicles. However, ROGs are also emitted from activities that involve painting, other types of architectural coatings, or asphalt paving. Construction phases would include demolition, site preparation, placement of infrastructure, placement of foundations for structures, and fabrication of structures. Demolition and construction activities would require the use of heavy trucks, material loaders, cranes, concrete breakers, and other mobile and stationary construction equipment.

It is anticipated that construction of the proposed project would be divided into three phases. The first phase would demolish 316 existing dwelling units and construct 521 new units and the community support services in the eastern portion of the project site (i.e., Blocks 1 through 9). Eastern portions of Sunnydale Avenue and Blythedale Avenue, and Santos Street would be reconfigured during this first phase. Phase 2 would continue the reconfiguration of Sunnydale Avenue west and introduce the new north-south streets, "B", "C", and "D" Streets. During this phase, 279 existing dwelling units would be demolished and 625 new units would be developed in the northwestern portion of the project site (i.e., Blocks 10 through 21). Phase 3 would connect the new north-south streets to Blythedale Avenue. During this phase, 191 existing dwelling units would be demolished and 554 new dwelling units would be constructed in the southwest portion of the project site (i.e., Blocks 22 through 36).

During each phase, the existing buildings, streets, and utilities would be demolished first, and rough grading of the streets, building pads and open space would occur. The construction of new underground utility infrastructure with appropriate tie-ins to existing utilities (e.g., neighborhood power transformers, and sanitary sewer boxes) would follow, and then buildings would be constructed as determined by the financing available as well as the best scenarios for facilitating equipment and material access to the building sites.

It is estimated that each phase of construction would last between 3 to 5 years for a total of 9 to 15 years in duration for the entire project. In other words, when Phase 1 is under construction, existing buildings in Phase 2 and 3 areas would continue their current occupancy. There would be no more than one phase under demolition or construction at any given time.

Fugitive Dust

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute particulate matter into the local atmosphere. Despite the established federal standards for air pollutants and ongoing implementation of state and regional air quality control plans, air pollutants continue to have impacts on human health throughout the country. California has found that particulate matter exposure can cause health effects at lower levels than national standards. The current health burden of particulate matter demands that, where possible, public agencies take feasible available actions to reduce sources of particulate matter exposure. According to CARB, reducing ambient particulate matter from 1998 – 2000 levels to natural background concentrations in San Francisco would prevent over 200 premature deaths.

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

In response, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes, generally referred hereto as 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 overall construction work in order to protect the health of the general public and of onsite workers, minimize public nuisance complaints, and to avoid orders to stop work by DBI.

The Ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that 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 less than one-half acre that are unlikely to result in any visible wind-blown dust.

For projects over one-half acre, such as the proposed project, the Dust Control Ordinance requires that the project sponsor submit a Dust Control Plan for approval by DPH. 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. Interior-only tenant improvement projects that are more than one-half acre in size that will not produce exterior visible dust are exempt from the site-specific Dust Control Plan requirement.

The site-specific Dust Control Plan would require the project sponsor to: 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; apply soil stabilizers to inactive areas; and sweep off adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with these dust control requirements.

Implementation of dust control measures in compliance with the regulations and procedures set forth by the San Francisco Dust Control Ordinance would ensure that potential dust-related air quality impacts of the proposed project would be *less than significant*. Please also see Section 4.18, which describes how the Dust Control Ordinance reduces construction impacts to water quality.

Criteria Air Pollutants

As discussed above, construction activities would result in emissions of criteria air pollutants from the use of off- and on-road vehicles and equipment. Criteria and ozone precursor pollutant (NO_x, ROG, PM₁₀, PM_{2.5}) exhaust emissions from construction equipment and truck and other vehicle trips would incrementally add to the regional atmospheric loading of these pollutants during project construction. Daily engine exhaust emissions from construction activities, in addition to operational emissions, as applicable, are compared with significance thresholds in **Table 4.10-3**. Total construction emissions were calculated using the latest emission factors available (EMFAC 2011 and OFFROAD 2011 equivalent), and total emissions were divided by the number of construction days to derive average daily emissions for comparison against the applicable significance threshold levels. Average daily emissions and maximum annual emissions are reported in Table 4.10-3.

The emissions presented in Table 4.10-3 would be generated by many different construction sources including off-road construction equipment--such as loaders, backhoes, and cranes--and on- road trucks. Some operational emissions of the project would occur during construction of Phase 2 and Phase 3; therefore, these operational emissions are also included in Table 4.10-3 to fully represent all project emissions during and throughout all construction phases.

Construction and simultaneous operation of portions of the proposed project would result in emission of criteria pollutants and precursors that, with the exception of NO_x during Phase 1 and Phase 2 construction, would be at levels below thresholds of significance. However, because the

**TABLE 4.10-3
UNMITIGATED EMISSIONS DURING CONSTRUCTION**

	Average Daily Emissions (lbs/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	30	69	3.3	3.3
Phase 2 Construction	32	53	2.4	2.4
Phase 1 Operation	16	13	9.1	2.7
Phase 2 Construction Period Total	48	66	11.5	5.1
Phase 3 Construction	24	26	1.1	1.1
Phase 1 & 2 Operation	27	17	16	4.8
Phase 3 Construction Period Total	51	43	17	5.9
Threshold	54	54	82	54
Exceeds threshold?	No	Yes	No	No
Year	Maximum Annual Emissions (tons/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	5.5	12.6	0.6	0.6
Phase 2 Construction	5.8	9.7	0.4	0.4
Phase 1 Operation	2.6	2.0	1.4	0.4
Phase 2 Construction Period Total	8.4	12	1.8	0.8
Phase 3 Construction	4.4	4.7	0.2	0.2
Phase 1 & 2 Operation	4.6	2.6	2.5	0.7
Phase 3 Construction Period Total	9.0	7.3	2.7	0.9
Threshold	10	10	15	10
Exceeds threshold?	No	Yes	No	No

SOURCE: ENVIRON and ESA, 2014.

estimated construction emissions of NOx would exceed the applicable significance threshold, this would be a *significant* air quality impact. Consequently, **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** is identified to reduce NOx emissions associated with construction.

Mitigation Measure M-AQ-1 would substantially reduce construction-related emissions and represents all feasible mitigation measures for reducing emissions of NOx. Mitigated average daily and maximum annual emissions during the construction phases of the proposed project are compared with emission significance thresholds in **Table 4.10-4**. As can be seen in Table 4.10-4, construction-related emissions of NOx would be reduced by 49 percent during Phase 1 and 26 percent during Phase 2 with mitigation and the resultant emissions would no longer exceed the applicable threshold. This reduction is entirely attributable to the requirement for construction equipment to use Tier 3 engines and Level 3 verified diesel emissions control strategies (VDECS). Construction-related emissions of NOx would be *less than significant with mitigation*.

**TABLE 4.10-4
MITIGATED EMISSIONS DURING CONSTRUCTION**

	Average Daily Emissions (lbs/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	25	35	0.4	0.3
Phase 2 Construction	28	36	0.4	0.4
Phase 1 Operation	16	13	9.1	2.7
Phase 2 Construction Period Total	44	49	9.5	3.1
Phase 3 Construction	22	26	0.3	0.3
Phase 1 & 2 Operation	27	17	16	4.8
Phase 3 Construction Period Total	49	43	16	5.1
Threshold	54	54	82	54
Exceeds threshold?	No	No	No	No
Year	Maximum Annual Emissions (tons/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	4.6	6.6	0.1	0.1
Phase 2 Construction	5.1	6.6	0.1	0.1
Phase 1 Operation	2.6	2.0	1.4	0.4
Phase 2 Construction Period Total	7.7	8.6	1.5	0.5
Phase 3 Construction	4.0	4.8	0.1	0.1
Phase 1 & 2 Operation	4.6	2.6	2.5	0.7
Phase 3 Construction Period Total	8.6	7.4	2.6	0.8
Threshold	10	10	15	10
Exceeds threshold?	No	No	No	No

SOURCE: ENVIRON and ESA, 2014.

Summary of Impact AQ-1

Construction of the proposed project would generate emissions of fugitive dust and criteria air pollutants. The project sponsor, through its contractors, would be required to implement dust control measures in compliance with the requirements of the Construction Dust Control Ordinance, which would ensure that the construction-related impacts due to fugitive dust would be *less than significant*.

Estimated emissions of criteria air pollutants indicate that average daily construction emissions of ROG, PM₁₀, and PM 2.5 would be below the applicable BAAQMD thresholds. Emissions of NO_x, however, would exceed the applicable BAAQMD threshold. Implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization) would reduce NO_x emissions and the resultant emissions would not exceed the applicable threshold, and the construction-related impact due to emissions of NO_x would be *less than significant with mitigation*.

Impact AQ-1 would be *less than significant with mitigation* under CEQA.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.

Impact AQ-2: Criteria Pollutant Impacts During Operation

NEPA: This topic is not analyzed under NEPA.

CEQA: During project operations, the proposed project would not result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

After construction is completed and the proposed project is fully operational, criteria pollutant emissions would be emitted as a result of natural gas combustion for heating, landscape and maintenance equipment operations, and increased motor vehicle emissions. Although the project applicant would be required to comply with the permit requirements of the BAAQMD which would ensure that emissions from the generator would be reduced, operation of the generator would also result in criteria pollutant emissions.

Project operational criteria pollutant emissions were estimated using the CalEEMod model, version 2013.2.2. The model was refined to reflect the project-specific trip generation as determined in the transportation analysis, which considered the availability of transit systems within the area. Vehicle trip lengths from CalEEMod, which were developed with input from the BAAQMD, were used to determine the increase in vehicle miles travelled from the proposed project because project-specific trip lengths are not estimated in the transportation analysis. CalEEMod default emission factors for motor vehicle trips are provided from the EMFAC2011 model. Estimated emissions of reactive organic gases (ROG) from maintenance applications of architectural coatings reflect volatile organic compounds (VOC) content limits of Regulation 8, Rule 3 of the BAAQMD.

A diesel-powered emergency generator would be located in a building to be used for senior housing and retail mixed-use, at the northeast corner of the project site. Potential emissions from the emergency diesel generator (a stationary source) were estimated based on ARB/U.S. EPA Tier 3 emission standards. At this point in time, the project applicant has confirmed that specifications for the proposed generator are not available. In order to estimate emissions associated with the generator, it was assumed that this proposed generator, which is required for the 4-story, 150-unit senior care facility building, would meet the federal Tier 3 diesel engine standards for particulate matter for diesel engines with a rating between 75 and 750 horsepower, consistent with U.S. EPA regulations for emergency stationary diesel generators manufactured after 2010. Project operational emissions of criteria pollutants from vehicle, stationary (backup generator) and area sources are summed.

For more detail on the methodology used to quantify operational criteria pollutant emissions, see the AQTR in Appendix AQ.

Operational emissions are presented in **Table 4.10-5** and represent the build-out condition emissions associated with operation of the proposed project upon completion of construction activities. As shown in Table 4.10-5, post-construction operational activity would not generate emissions that exceed the thresholds for any criteria air pollutants or ozone precursors.

**TABLE 4.10-5
AVERAGE DAILY AND MAXIMUM ANNUAL OPERATIONAL EMISSIONS
AT PROJECT BUILDOUT**

	Average Daily Emissions (lb/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Area Source	26.8	0.9	0.4	0.4
Energy	0.3	2.3	0.2	0.2
Mobile	10.6	18.4	21.3	6.0
Stationary Source (generator)	0.1	0.6	<0.1	<0.1
Total	37.8	22.2	21.9	6.6
Threshold	54	54	82	54
Exceeds threshold?	No	No	No	No
Year	Maximum Annual Emissions (ton/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Area Source	4.7	0.1	<0.1	<0.1
Energy	0.1	0.4	<0.1	<0.1
Mobile	1.7	3.0	3.4	1.0
Stationary Source (generator)	<0.1	0.1	<0.1	<0.1
Total	6.4	3.6	3.5	1.0
Threshold	10	10	15	10
Exceeds threshold?	No	No	No	No

SOURCE: ENVIRON and ESA, 2014.

Upon buildout, the proposed project would not violate an air quality standard or contribute substantially to an existing air quality violation and would have a *less-than-significant* impact.

Operational Carbon Monoxide Hotspot

As discussed above, a project could result in a CO hot spot if it increases traffic volumes at affected intersections to more than 44,000 vehicles per hour. The transportation study shows the maximum traffic volumes that would occur with the project would be 6,827 vehicles per hour on Geneva Avenue in the 2030 Cumulative PM peak hour scenario. This volume is less than 16 percent of the BAAQMD screening volume of 44,000 vehicles per hour. The maximum traffic volume associated with the proposed project would be substantially lower than the 44,000 vehicles per hour screening threshold. Therefore, the proposed project would not create CO hot spots. Impacts related to CO hot spots are considered *less than significant* under CEQA.

Summary of Impact AQ-2

Operation of the proposed project would include a variety of sources that would contribute to long term emissions of criteria air pollutants (ROG, NOx, PM₁₀, and PM_{2.5}). These sources would include new vehicle trips, maintenance and operation of a standby diesel generator, natural gas combustion and area sources such as landscape equipment and use of consumer products. Calculations of average daily and maximum annual emissions indicate that levels of ROG and NOx, PM₁₀ and PM_{2.5} would not exceed significance thresholds. Therefore, this impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact AQ-3: Toxic Air Contaminants

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction and operation of the proposed project would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations. (Less than Significant with Mitigation)

As discussed above, San Francisco, in partnership with BAAQMD, has modeled and assessed air pollutant impacts from mobile, stationary, and area sources within the City. As described above, this assessment identified areas with poor air quality under existing conditions—the Air Pollutant Exposure Zone—which are based on significance thresholds for PM_{2.5} and excess cancer risk, or areas within the City that warrant special attention when siting land uses that either emit toxic air contaminants (TACs) or uses that are considered sensitive to air pollution. The project site is not located within the Air Pollutant Exposure Zone, meaning that, currently, excess cancer risk from all known sources is less than 100 per one million and annual average PM_{2.5} concentrations (ambient concentrations and concentrations from all known sources) are less than 10 µg/m³. Existing lifetime cancer risks on the project site range from 3.4 in one million to 35.7 in one million. Existing localized PM_{2.5} concentrations on the project site range from 8.1 to 8.6 micrograms per cubic meter. Under existing conditions, sensitive land uses exist on and off the project site, and the proposed project would construct an additional 915 residential units.

Excess cancer risk is evaluated over a 70-year lifetime, whereas PM_{2.5} concentrations are evaluated on an annual average basis. Therefore, the following evaluates excess cancer risk as a result of exposure to both construction and operational emissions together and PM_{2.5} concentrations for construction and operation, separately. Construction activity often results in elevated pollutant concentrations relative to operational activity, as construction periods typically have a concentrated amount of pollutant-generating equipment.

Because construction of the proposed project would be phased over the course of approximately 9 to 15 years, construction activities would overlap with operational activity at the project site. For instance, after Phase 1 of the project is completed, operational activity associated with Phase 1 would overlap with construction activity that would occur during Phase 2 of the project. After the second phase of the proposed project is completed, operational activity from the first two phases would overlap with construction activity that would occur during Phase 3. Therefore, this analysis assesses the potential for the proposed project to result in areas that exceed the health protective thresholds discussed above during construction and at full buildout. For PM_{2.5} concentrations, the results below include maximum cumulative PM_{2.5} concentrations during construction and at full build out.

Project Sources of TACs and PM_{2.5}

Construction Sources. Off-road equipment (which includes construction-related equipment) is a large contributor to diesel particulate matter (DPM) emissions in California, although since 2007,

CARB has found the emissions to be substantially lower than previously expected.¹⁴ Newer and more refined emission inventories have lowered the estimates of DPM emissions from off-road equipment such that off-road equipment is now considered the sixth largest source of DPM emissions in California.¹⁵ For example, CARB's revised estimates of PM emissions (of which DPM is a major component) for the SFBAAB for the year 2010 have decreased by 83 percent. Approximately half of the reduction in emissions can be attributed to the economic recession and half to updated methodologies used to better assess construction emissions.¹⁶

Additionally, a number of federal and state regulations are requiring cleaner off-road equipment. Specifically, both U.S. EPA and California have set emissions standards for new off-road equipment engines, ranging from Tier 1 to Tier 4. Tier 1 emission standards were phased in between 1996 and 2000, and Tier 4 interim and final emission standards for all new engines will be phased in between 2008 and 2015. To meet the Tier 4 emission standards, engine manufacturers will be required to produce new engines with advanced emission-control technologies. Although the full benefits of these regulations will not be realized for several years, the U.S. EPA estimates that by implementing the federal Tier 4 standards, NO_x and PM emissions will be reduced by more than 90 percent.¹⁷ Furthermore, California regulations limit maximum idling times to 5 minutes, which further reduces public exposure to NO_x and PM emissions.¹⁸

Construction activities generally do not lend themselves to analysis of long-term health risks because of their temporary and variable nature. As explained in BAAQMD's *CEQA Air Quality Guidelines*:

“Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of health risk.”¹⁹

Therefore, project-level analyses of construction activities have a tendency to overestimate assessments of long-term health risks. While the proposed project is not within an Air Pollutant Exposure Zone, as discussed above, the construction activity proposed to occur in multiple phases over 15 years may be substantial enough to result in new areas that meet the Air Pollutant Exposure Zone criteria.

¹⁴ ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, p.1 and p. 13 (Figure 4), October 2010.

¹⁵ ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010.

¹⁶ ARB, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and the Off-Road Large Spark-Ignition Fleet Requirements*, October 2010.

¹⁷ U.S. EPA, “Clean Air Nonroad Diesel Rule: Fact Sheet,” May 2004.

¹⁸ California Code of Regulations, Title 13, Division 3, § 2485.

¹⁹ BAAQMD, *CEQA Air Quality Guidelines*, May 2011, page 8-6.

The sources of emissions that would occur during the construction period include the use of heavy-duty, on-road and off-road equipment. Construction would occur in three non-overlapping phases from 2016 to 2027. The phases (Phase 1, Phase 2, and Phase 3) each consist of a separate area of the project site that would first be cleared of existing development then developed with new land uses.

Operational Sources. The sources of emissions that would occur during the operational phase of the project include emissions from mobile sources (passenger vehicles and delivery vehicles), and one stationary source (diesel generator). Diesel generators, if larger than 50 horsepower, must obtain a permit from the BAAQMD and comply with the ATCM for Stationary Compression Ignition Engines, as discussed in Section 4.10.3.3.

Project-Specific Risk Assessment. Assessment of health risks related to use of diesel-powered construction equipment was conducted by performing a project-specific air quality dispersion analysis and risk assessment. Please see to the AQTR in Appendix AQ for a detailed description of methodology.

The cumulative risk analysis for construction and operation estimated potential DPM, organic toxic compounds and PM_{2.5} impacts on the sensitive receptors, inclusive of occupied dwellings within the project site and one kilometer from the project boundary.

For the evaluation of risks, the cancer risk is based on TAC concentrations. Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole.

To evaluate TAC and PM_{2.5} impacts from the proposed project, near-field air dispersion modeling of DPM and PM_{2.5} from project construction emission sources was conducted using the U.S. EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD), version 11059,²⁰ as recommended by the BAAQMD *CEQA Air Quality Guidelines*. Air dispersion modeling applications used meteorological data from the Mission Bay meteorological site operated by the BAAQMD to provide the most representative data set for this analysis.

This assessment estimated diesel exhaust PM, PM_{2.5} and speciated total organic gas concentrations based on data generated by the OFFROAD2007 mobile source inventory and the 2011 Inventory Model for the In-use Off-road Equipment Rule. DPM, total organic gases (TOG) and PM_{2.5} emissions rates were used as input into AERMOD to predict worst case DPM, TOG and PM_{2.5} concentrations, respectively. DPM and speciated TOG concentrations were then used to determine increased cancer risk based on the health risk assessment methodology published by BAAQMD and the Office of Environmental Health Hazard Assessment and age sensitivity factors.

²⁰ U.S. Environmental Protection Agency, *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*, Office of Air Quality Planning and Standards, Emissions Monitoring and Analysis Division, Research Triangle Park, North Carolina, EPA-454/B-03-001, September 2004.

Air concentrations were evaluated at locations within 1 kilometer of the project boundary. Construction of the project is split into three phases, and residents in the area covered by one phase may be on-site while another phase of the project is constructed. As a result, both on-site and off-site receptors were evaluated. For on-site residential receptors, depending on which construction phase was evaluated, a 10 meter by 10 meter receptor grid was placed on either existing buildings or future buildings to represent indoor residential locations. The receptor height at each building level was calculated by adding 1.8 meter to the building height at that level extracted from the building height maps. In addition, a receptor grid was placed on the on-site area outside of the building footprint to represent outdoor locations. A single receptor was also placed at the northeastern corner of the project site to represent the proposed day care facility after Phase 1 construction is completed.

Cancer risk and PM_{2.5} concentrations were evaluated for project construction assuming duration of 11.2 years (134 months) divided into three phases and project operation consisting of non-emergency maintenance and testing of an emergency diesel generator and project-generated vehicle traffic.

This evaluation conservatively evaluated the exposure and risks to off-site and on-site child residents for the project construction as well as off-site and on-site 70-year lifetime residents during project operation. As the residential exposure assumptions are more conservative with respect to length of exposure on both a daily and lifetime basis than those for other sensitive receptor types (including the future on-site day care facility, the off-site schools and other sensitive receptors), a conservative approach of considering all sensitive receptors as residential receptors was applied in the analysis.

Using a 10 meter receptor grid, the DPM and PM_{2.5} concentrations for each phase of construction were modeled separately and the project-generated excess cancer risk was determined. The total excess cancer risk and PM_{2.5} concentrations from the sum of all sources (existing sources plus ambient [for PM_{2.5} only] plus project sources) for each receptor point were plotted to report the off-site Maximum Exposed Individual Sensitive Receptor (MEISR) from project construction. The maximum impact to off-site receptors was determined for each of the three phases of construction.

On-site residents within the two non-construction phase areas may be present during construction of a given phase. For example, residential units located in the Phase 2 and Phase 3 areas may be occupied during demolition and construction of Phase 1. In addition, residents within a given phase may re-locate to a different phase while the original phase is being constructed. For example, residents currently in the Phase 1 area may relocate to the Phase 2 or Phase 3 areas during construction. All possible combinations of locations for an on-site resident were considered and exposures assessed for these combinations. Off-site child residents (living adjacent to the project site and not within any of the project's three phases) were assumed to be present at one location during the entirety of construction.

Because a combination of locations was evaluated for on-site receptors during construction, the MEISR for Project construction was associated with an average over a combination of locations rather than a specific location. The combination of locations assumed residents occupying Phase III

existing buildings during Phases I and II construction and relocating to Phase II new buildings during Phase III construction. In addition, because multiple receptors exist within each location (i.e., Phase III existing buildings and Phase II new buildings), it would be overly conservative to select a single receptor locations that is closest to the construction zone or maximally exposed to the construction emissions of each phase, as it would not be expected that a resident would be in the Phase III existing building that was maximally exposed to Phase I construction and then move to another Phase III existing building that was maximally exposed to Phase II construction.

To compensate for this overly conservative assumption, the analysis averaged the risks from being exposed to another phase of construction associated with all locations within each phase area. For example, the risks for all locations within the Phase III exiting buildings exposed to Phase I construction were averaged to calculate the mean risk. Then the mean risks during Phase II of construction were averaged for the same locations. Because the construction sources of each phase would be different, the averaging of the same locations would also be different. Next the risks at all locations in the new Phase II buildings during Phase III construction were calculated. The three averaged risk values for each location were then summed to yield the total mean risk. All the possible combinations of receptors were evaluated (e.g., residents in Phase III existing buildings exposed to Phase I construction, Phase III existing residents exposed to Phase II construction, and Phase II new residents exposed to Phase III construction) and presented as a risk of one standard deviation above the total mean. This approach was discussed and approved by SFEP as a reasonable yet conservative exposure scenario.

The primary construction emissions of concern, DPM and PM_{2.5}, would be emitted by diesel-powered construction equipment and truck trips hauling excavated materials. The project-specific health risk assessment was based on the use of diesel equipment as provided by the project sponsor.

Cancer Risk. The results of the risk assessment are presented in **Table 4.10-6** and **Table 4.10-7** below for both the off-site and on-site MEISR, respectively, in an unmitigated scenario. These estimated health risks and annual average PM_{2.5} concentrations are from construction and for operation. Mitigated construction-controlled emissions assume use of off-road construction equipment with U.S. EPA's Tier 3 emissions standard plus level 3 VDECS identified in Impact AQ-1. Note that the maximum excess lifetime cancer risks for these different source categories do not necessarily occur at the same location.

Table 4.10-6 indicates the cumulative cancer risk would be more than 100 in one million for the maximally exposed off-site receptor.

As mentioned previously, given the potential for on-site relocation of existing receptors, a location combination case was evaluated assuming child residents, who are more sensitive to inhaled pollutants than are adults, would be present in existing buildings in the Phase 3 project area during construction of Phase 1 and Phase 2 and then relocated to new Phase 2 buildings during construction of Phase 3. This represents a conservative estimate and consequently, cancer risks from construction are presented as a range in Table 4.10-7, with the upper end of the range reflecting this worst-case scenario.

TABLE 4.10-6
LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT OFF-SITE RECEPTOR

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	19.4	8.5
Construction Total	163	0.67
Project Operations - Generator	7.4	0.01
Project Operations – Mobile	2.1	0.10
Cumulative Total	192	9.17/8.61 ^a
Threshold	100	10
Significant?	Yes	No

^a Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

TABLE 4.10-7
LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT ON-SITE RECEPTOR

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	35.7	8.6
Construction Total ^a	32/ 52	0.09/0.17
Project Operations - Generator	6.3	0.01
Project Operations – Mobile	1.8	0.03
Cumulative Total	75.8/95.8 ^a	8.77/8.64 ^b
Threshold	100	10
Significant?	No	No

^a This total provides a range of values. The first of which is the mean value and the second of which is the mean plus one standard deviation.

^b Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

Implementation of **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** would reduce the impacts from construction equipment for which “tiered” equipment (equipment with relatively newer engines rated to emit lesser levels of pollutants) is available. Construction-related emissions of DPM would be reduced by as much as 85 percent during Phase 1 with mitigation and the resultant cumulative cancer risk would not exceed the applicable threshold. This reduction is entirely attributable to the requirement for construction equipment to use Tier 3 engines and Level 3 VDECS. Mitigated risk and PM_{2.5} concentration values with implementation

of **Mitigation Measure M-AQ-1** are presented in **Table 4.10-8** for the maximally exposed off-site receptor and in **Table 4.10-9** for the maximally exposed on-site receptor.

TABLE 4.10-8
MITIGATED LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT OFF-SITE RECEPTOR

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	19.4	8.5
Construction Total	9.2	0.011
Project Operations - Generator	7.4	0.01
Project Operations – Mobile	2.1	0.10
Cumulative Total	38	8.5/8.6 ^a
Threshold	100	10
Significant?	No	No

^a Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

TABLE 4.10-9
MITIGATED LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT ON-SITE RECEPTOR

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	35.7	8.6
Construction Total ^a	3.6/5.5	0.01/0.02
Project Operations - Generator	6.3	0.01
Project Operations – Mobile	1.8	0.03
Cumulative Total	47/49 ^a	8.6/8.6 ^b
Threshold	100	10
Significant?	No	No

^a This total provides a range of values. The first of which is the mean value and the second of which is the mean plus one standard deviation.

^b Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

As shown in these tables, with feasible mitigation the cumulative cancer risk at the maximally exposed off-site receptor would be less than 100 in one million. Consequently, the proposed project's construction and operational activities would not generate TACs that would expose existing or new sensitive receptors to substantial pollutant concentrations. This would be a *less than significant impact with mitigation*.

Summary of Impact AQ-3

Construction of the proposed project would generate emissions of toxic air contaminants, including DPM. The project-specific health risk assessment conducted indicated that without mitigation, the project would exceed the significance threshold for increased cancer risk and would be a significant impact. Annual Average concentrations of PM_{2.5} would be below 10 µg/m³ and would be less than significant without mitigation. With implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), impacts related to increased cancer risk would be reduced to less than significant. Therefore, this impact would be ***less than significant with mitigation*** under CEQA because construction and operation of the proposed project would generate toxic air contaminants, including DPM, which would expose sensitive receptors to substantial pollutant concentrations, but emissions would be reduced to a less-than-significant level through implementation of identified mitigation.

Mitigation Measure M-AQ-1: Construction Emissions Minimization

Impact AQ-4: Clean Air Plan

NEPA: This topic is not analyzed under NEPA.

CEQA: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (Less than Significant)

The most recently adopted air quality plan for the SFBAAB is the *2010 Clean Air Plan*. The *2010 Clean Air Plan* is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the state ozone standards as expeditiously as practicable and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. In determining consistency with the *2010 Clean Air Plan* (CAP), this analysis considers whether the project would: (1) support the primary goals of the CAP, (2) include applicable control measures from the CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the CAP.

To meet the primary goals, the CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary and area source measures, mobile source measures, transportation control measures, land use measures, and energy and climate measures. The CAP 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. To this end, the *2010 Clean Air Plan* includes 55 control measures aimed at reducing air pollution in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures and energy and climate control measures. The proposed project would be consistent with energy and climate control measures as discussed in Section 4.11, *Greenhouse Gas Emissions*, which demonstrates

that the proposed project would comply with the applicable provisions of the City of San Francisco's Greenhouse Gas Reduction Strategy.

The compact development of the proposed project and high availability of viable transportation options ensure that residents could bicycle, walk, and ride transit to and from the project site instead of taking trips via private automobile. These features ensure that the project would avoid substantial growth in automobile trips and vehicle miles traveled. The proposed project would be generally consistent with the *San Francisco General Plan*. Transportation control measures that are identified in the *2010 Clean Air Plan* are implemented by the *San Francisco General Plan* and the *Planning Code*, for example, through the City of San Francisco's Transit First Policy, bicycle parking requirements, and transit impact development fees applicable to the proposed project. By complying with these requirements, the project would include relevant transportation control measures specified by the *2010 Clean Air Plan*.

Examples of a project that could cause the disruption or delay of *Clean Air Plan* control measures are projects that would preclude the extension of a transit line or bike path, or projects that would include excessive parking beyond parking requirements. The proposed project would replace and add additional residential units within a dense, walkable urban area near a concentration of regional and local transit service. It would not preclude the extension of a transit line or a bike path or any other transit improvement, and thus would avoid disrupting or hindering implementation of control measures identified in the CAP.

Therefore, the proposed project would not conflict with, or obstruct implementation of the *2010 Clean Air Plan*, and this impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact AQ-5: Odors

NEPA: This topic is not analyzed under NEPA.

CEQA: The proposed project would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. As discussed in the Setting section, none of these sources exist within 1 mile of the project site. The Recology Transfer station and recycling facility is located more than 1 mile from, and downwind of, the project site. Observation indicates that the project site is not substantially affected by sources of odors based on multiple technician site visits.²¹

²¹ An ESA air quality and noise analyst conducted noise monitoring on April 24th and 25th 2013 during which observations regarding wind, cloud cover and the absence of noticeable odors were also noted.

During construction, diesel exhaust from construction equipment would generate some odors. However, construction-related odors would be temporary and would not persist upon project completion.

Additionally, the proposed project includes is residential in nature with a small retail component (i.e., 16,200 square feet) and would not create a significant sources of new odors. Therefore, odor impacts would be *less than significant* under CEQA.

Mitigation: None required.

Impact AQ-6: Clean Air Act

NEPA: The proposed project would not generate federal non-attainment criteria pollutants or their precursors in quantities that would trigger the need for a general conformity assessment. (Less than Significant)

CEQA: This topic is not analyzed under CEQA.

In relation to the NAAQS, the project site is located in an air basin designated as a nonattainment area for the 8-hour ozone and 24-hour PM_{2.5} standards and as a maintenance area for the CO standard.²² Section 176(c) of the CAA, also known as the General Conformity requirements, requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the CAA and SIPs.

Table 4.10-10 shows the relevant conformity thresholds, and maximum estimated emissions considering both construction and operations. As the project will be phased on occupied intermittently during construction the emissions reported represent the maximum values throughout the construction period. The actual year of occurrences varies as the same pollutants are generated in greater amounts during construction while others are generated in greater amounts during operation. As shown in Table 4.10-10, the proposed project would not exceed the applicability (de minimis) thresholds for General Conformity; therefore, the project would not violate or contribute to new violations of the NAAQS, would not increase the frequency or severity of existing violations of the NAAQS, and would not delay timely attainment of the NAAQS for ozone or PM_{2.5} and a formal General Conformity determination is not required. This impact is considered *less than significant* under NEPA.

Mitigation: None required.

²² BAAQMD, Air Quality Standards and Attainment Status, available online at: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed April 20, 2011.

TABLE 4.10-10
GENERAL CONFORMITY APPLICABILITY ASSESSMENT (tons per year, unmitigated)

Criteria Air Pollutant	Conformity Applicability (de minimis) Threshold for SFBAAB	Maximum Project Emissions and Phase of Occurrence
Ozone precursors (NO _x)	100	12.6 (Phase 1 construction)
Ozone precursor (VOC)	100	9.0 (phase 3 construction with operations)
PM _{2.5}	100	1.0 (2027 operation)
CO	100	20.8 (2027 operation)

Proposed Project Variant

The project variant would maintain the same building envelope (i.e., same number of buildings in approximately the same size and configuration) as the proposed project. Consequently, construction related emissions of the variant would be largely the same as the proposed project. Construction emission significance thresholds are established in terms of an average daily value and the marginal reduction in the number of residential units would result in little, if any, reduction in the daily construction-related emissions addressed in Impact AQ-1 or in the resultant construction-related risk addressed in Impact AQ-3. Therefore, implementation of the proposed project variant would result in a *less than significant with mitigation* impacts from construction-related emissions. **Mitigation Measure M-AQ-1: Construction Emissions Minimization** would be required.

From an operational standpoint, the transportation analysis concludes that the proposed project variant would generate the same number of net new vehicle trips as the proposed project, as well as distribute and assign these trips as described for the proposed project. As a result, the operational mobile emissions of the variant would be the same as the proposed project. The marginal reduction in the number of residential units would result in little, if any, reduction in the energy source or area source emissions addressed in Impact AQ-2. Therefore, implementation of the proposed project variant would result in a *less-than-significant* impacts from operational air pollutant emissions.

Alternative A: Reduced Development / Density Alternative

Impact A-AQ-1: Criteria Pollutant Impacts During Construction

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction of the Reduced Development / Density Alternative would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant with Mitigation)

Construction emissions under the Reduced Development/Density Alternative were calculated using the same methodology as for the proposed project. The difference in emissions is

attributable to reduced square footage of construction. The emissions from the off-road construction equipment are calculated by scaling down that the activities that will be affected by the reduced gross square footage of the alternative by the ratio of the alternative square footage to the project square footage.

Because the criteria air pollutant emissions from the construction on-road vehicles are relatively small compared to that from the off-road equipment, no additional emissions scaling methodology was developed for these emissions. Instead, the ratio of the off-road emissions between the Reduced Development/Density Alternative and the project were used to scale the on-road emissions.

It was assumed that the Reduced Development/Density Alternative would have approximately the same amount of new pavement. The architectural coating emissions for each construction phase, however, were scaled by the ratio of alternative gross square footage over project gross square footage.

Criteria pollutant emissions of the Reduced Development/Density Alternative from use of construction equipment and other construction-related sources are quantified by phase in **Table 4.10-11**, which shows unmitigated emissions. Unmitigated emissions of the Reduced Development/Density Alternative would be less than those of the proposed project; therefore, mitigated emissions of this alternative would also be less than those of the proposed project. Because unmitigated emissions would exceed the NO_x thresholds during Phase 1 and Phase 2 construction, **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** is would also be required for the Reduced Development/Density Alternative to reduce NO_x emissions associated with construction.

Construction-related emissions of NO_x under the Reduced Development/Density Alternative would be *less than significant with mitigation*.

Summary of Impact A-AQ-1

In summary, estimated emissions of criteria air pollutants indicate that average daily construction emissions of ROG, PM₁₀, and PM_{2.5} would be below the applicable BAAQMD thresholds. Emissions of NO_x, however, would exceed the applicable BAAQMD threshold. Implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization) would reduce NO_x emissions and the resultant emissions would not exceed the applicable threshold, and the construction-related impact due to emissions of NO_x would be *less than significant with mitigation*.

Impact A-AQ-1 would be *less than significant with mitigation* under CEQA.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.

**TABLE 4.10-11
AVERAGE DAILY AND MAXIMUM ANNUAL CONSTRUCTION EMISSIONS FOR
REDUCED DEVELOPMENT/DENSITY ALTERNATIVE**

	Average Daily Emissions (lb/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	23	62	2.9	2.9
Phase 2 Construction	23	47	2.1	2.1
Phase 1 Operation	10	11	6.0	2.0
Phase 2 Total	35	58	8.1	4.1
Phase 3 Construction	17	23	1.0	1.0
Phase 1 & 2 Operation	19	14	11	3.4
Phase 3 Total	36	37	12	4.4
Threshold	54	54	82	54
Exceeds Threshold?	No	Yes	No	No
Year	Maximum Annual Emissions (Ton/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction Only^a	4.2	11	0.53	0.53
Phase 2 Construction ^b	4.2	8.6	0.38	0.38
Phase 1 Operation ^b	1.7	1.4	0.92	0.28
Phase 2 Total^b	5.9	10	1.3	0.66
Phase 3 Construction ^c	3.1	4.2	0.18	0.18
Phase 1 & 2 Operation ^c	3.1	1.9	1.6	0.50
Phase 3 Total^c	6.2	6.1	1.8	0.68
Threshold	10	10	15	10
Exceeds Threshold?	No	Yes	No	No

^a worst case year 2016 assumed.

^b worst case year 2019 assumed.

^c worst case year 2023 assumed.

SOURCE: ENVIRON, 2014.

Impact A-AQ-2: Criteria Pollutant Impacts During Operation

NEPA: This topic is not analyzed under NEPA.

CEQA: During Reduced Development / Density Alternative operations, the proposed project would not result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant)

Similar to the emissions from the proposed project, the emissions increases attributable to operation of the Reduced Development/Density Alternative would be from the total of alternative-related stationary sources (a diesel-fueled backup emergency generator engine), operational vehicle trips generated by on-site uses, and area sources such as use of natural gas for heating and cooking. Emissions were quantified for operation of the proposed land uses under the Reduced Development/Density Alternative using CalEEMod version 2013.2.2, and used the same methodologies that were previously described for the proposed project. Based on the

Transportation Impact Study, a net vehicle trip generation increase of 3,183 daily trips was input into CalEEMod to calculate mobile emissions.

Criteria pollutant emissions from the anticipated operation-related sources of the Reduced Development/Density Alternative are quantified in **Table 4.10-12** and represent the build-out condition emissions associated with operation of the Reduced Development/Density Alternative upon completion of construction activities. As shown in Table 4.10-12, post-construction operational activity would not generate emissions that exceed the thresholds for any criteria air pollutants or ozone precursors.

TABLE 4.10-12
AVERAGE DAILY AND MAXIMUM ANNUAL OPERATIONAL
EMISSIONS OF THE REDUCED DEVELOPMENT/DENSITY ALTERNATIVE

Source	ROG	NOx	PM ₁₀	PM _{2.5}
Average Daily Emissions (pounds/day)				
Area Source	18	0.56	0.27	0.27
Energy	0.18	1.5	0.12	0.12
Mobile	7.5	12.7	14	4.11
Stationary Source (generator)	0.26	4.3	0.42	0.42
Total	26	19	15	4.9
Threshold	54	54	82	54
Exceeds Threshold?	No	No	No	No
Maximum Annual Emissions (short tons/year)				
Area Source	3.1	0.05	0.02	0.02
Energy	0.03	0.28	0.02	0.02
Mobile	1.2	2.0	2.3	0.66
Stationary Source (generator)	0.01	0.11	0.01	0.01
Total	4.31	2.5	2.3	0.71
Threshold	10	10	15	10
Exceeds Threshold?	No	No	No	No

SOURCE: ESA, 2013; ENVIRON 2014

Upon build-out, the alternative would not violate an air quality standard or contribute substantially to an existing air quality violation and would have a *less-than-significant* impact.

Summary of Impact A-AQ-2

In summary, operation of the Reduced Development / Density Alternative would include a variety of sources that would contribute to long term emissions of criteria air pollutants (ROG, NOx, PM₁₀, and PM_{2.5}). These sources would include new vehicle trips, maintenance and operation of a standby diesel generator, natural gas combustion and area sources such as landscape equipment and use of consumer products. Calculations of average daily and maximum annual emissions indicate that levels of ROG and NOx, PM₁₀ and PM_{2.5} would not exceed significance thresholds. Therefore, this impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact A-AQ-3: Toxic Air Contaminants

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction and operation of the Reduced Development / Density Alternative would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations. (Less than Significant with Mitigation)

Construction of the Reduced Development / Density Alternative would generate emissions of toxic air contaminants, including DPM. A project-specific health risk assessment was conducted in the same manner as described in Impact AQ-3 for the proposed project but with revised construction and operational emissions specific to this alternative, calculated as described in Impact A-AQ-1 and Impact A-AQ-2, respectively.

Cancer Risk. The results of the risk assessment are of the Reduced Development / Density Alternative presented in **Table 4.10-13** and **Table 4.10-14** below for both the off-site and on-site MEISR, respectively, in an unmitigated scenario. These estimated health risks and annual average PM_{2.5} concentrations are from construction and from operation.

Implementation of **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** would reduce the impacts from standardized construction equipment for which “tiered” equipment is available. Construction-related emissions of DPM would be reduced by as much as 85 percent during Phase 1 with mitigation, and the resultant cumulative cancer risk would no longer exceed the applicable threshold. This reduction is entirely attributable to the requirement for construction equipment to use Tier 2 engines and Level 3 VDECS. Mitigated risk and PM_{2.5} concentration values with implementation of **Mitigation Measure M-AQ-1** from construction of the Reduced Development/Density Alternative would be less than those of the proposed project and would therefore be less than significant.

**TABLE 4.10-13
UNMITIGATED LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT OFF-SITE RECEPTOR -
REDUCED DEVELOPMENT/DENSITY ALTERNATIVE**

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	6.9	8.2
Construction Total	144	0.59
Project Operations - Generator	1.6	<0.01
Project Operations - Mobile	0.81	0.02
Cumulative Total	153	8.8/8.2^a
Threshold	100	10
Significant?	Yes	No

^a Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

**TABLE 4.10-14
MITIGATED LIFETIME EXCESS CANCER RISK AND
ANNUAL AVERAGE PM_{2.5} CONCENTRATIONS AT ON-SITE RECEPTOR -
REDUCED DEVELOPMENT/DENSITY ALTERNATIVE**

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	35.7	8.6
Construction Total ^a	28/48	0.08/0.16
Project Operations - Generator	6.3	0.01
Project Operations – Mobile	1.8	0.03
Cumulative Total	72/92 ^a	8.7/8.8 ^b
Threshold	100	10
Significant?	No	No

^a This total provides a range of values. The first of which is the mean value and the second of which is the mean plus one standard deviation.

^b Presented as construction total/operational total. Cumulative totals for PM_{2.5} are separate for construction and operation as the worst case concentrations would not occur simultaneously.

SOURCE: ENVIRON, 2014

Summary of Impact A-AQ-3

Construction of the Reduced Development / Density Alternative would generate emissions of toxic air contaminants, including DPM. The health risk assessment conducted indicated that without mitigation, the project would exceed the significance threshold for increased cancer risk and would be a significant impact. Annual Average concentrations of PM_{2.5} would be below 10 µg/m³ and would be less than significant without mitigation. With implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), impacts related to increased cancer risk would be reduced to less than significant. Therefore, this impact would be ***less than significant with mitigation*** under CEQA because construction and operation of the alternative would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations, but emissions would be reduced to a less-than-significant level through implementation of identified mitigation.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.

Impact A-AQ-4: Clean Air Plan

NEPA: This topic is not analyzed under NEPA.

CEQA: The Reduced Development / Density Alternative would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (Less than Significant)

The CAP measures most applicable to the Reduced Development/Density Alternative are transportation control measures and energy and climate control measures. Reduced Development/Density Alternative would be consistent with energy and climate control measures as discussed in

Section 4.11, *Greenhouse Gas Emissions*, which demonstrates that the Reduced Development/Density Alternative would comply with the applicable provisions of the City's Greenhouse Gas Reduction Strategy.

The Reduced Development / Density Alternative characteristics that would reduce emissions would be substantially similar to those of the proposed project. The alternative would not interfere with implementation of the *2010 Clean Air Plan*, and because the Reduced Development/Density Alternative would be consistent with the applicable air quality plan that demonstrates how the region will improve ambient air quality and achieve the state and federal ambient air quality standards, this impact would be *less than significant*.

Mitigation: None required.

Impact A-AQ-5: Odors

NEPA: This topic is not analyzed under NEPA.

CEQA: The Reduced Development / Density Alternative would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

During construction of the alternative, diesel exhaust from construction equipment would generate some odors, similar to the odors that would be generated under construction of the proposed project. These odors would be temporary and would not persist upon project completion.

The alternative would not involve operation of odor sources of concern, such as wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. Moreover, none of these sources exist within 1 mile of the project site, and observation indicates that the project site is not substantially affected by sources of odors based on multiple technician site visits.²³

Therefore, odor impacts would be *less than significant* under CEQA.

Mitigation: None required.

²³ An ESA air quality and noise analyst conducted noise monitoring on April 24th and 25th 2013 during which observations regarding wind, cloud cover and the absence of noticeable odors were also noted.

Impact A-AQ-6: Clean Air Act

NEPA: The Reduced Development / Density Alternative would not generate federal non-attainment criteria pollutants or their precursors in quantities that would trigger the need for a general conformity assessment. (Less than Significant)

CEQA: This topic is not analyzed under CEQA.

In relation to the NAAQS, the project site is located in an air basin designated as a nonattainment area for the 8-hour ozone and 24-hour PM_{2.5} standards and as a maintenance area for the CO standard.²⁴ Section 176(c) of the CAA, also known as the General Conformity requirements, requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the CAA and SIPs.

Table 4.10-15 shows the relevant conformity thresholds, and maximum estimated emissions considering both construction and operations under the Reduced Development/Density Alternative. As the Reduced Development/Density Alternative will be phased and occupied intermittently during construction the emissions reported represent the maximum values throughout the construction period. The actual year of occurrence varies as the same pollutants are generated in greater amounts during construction while others are generated in greater amounts during operation. As shown in Table 4.10-15, the Reduced Development/Density Alternative would not exceed the applicability (de minimis) thresholds for General Conformity; therefore, the Reduced Development/Density Alternative would not violate or contribute to new violations of the NAAQS, would not increase the frequency or severity of existing violations of the NAAQS, and would not delay timely attainment of the NAAQS for ozone or PM_{2.5} and a formal General Conformity determination is not required. This impact is considered *less than significant* under NEPA.

Mitigation: None required.

**TABLE 4.10-15
GENERAL CONFORMITY APPLICABILITY ASSESSMENT -
REDUCED DEVELOPMENT/DENSITY ALTERNATIVE (tons per year, unmitigated)**

Criteria Air Pollutant	Conformity Applicability (de minimis) Threshold for SFBAAB	Maximum Project Emissions and Phase of Occurrence
Ozone precursors (NO _x)	100	11 (Phase 1 construction)
Ozone precursor (VOC)	100	6.2 (phase 3 construction with operations)
PM _{2.5}	100	0.7 (2027 operation)
CO	100	14 (2027 operation)

²⁴ BAAQMD, Air Quality Standards and Attainment Status, available online at: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed April 20, 2011.

Alternative B: One-for-One Replacement Alternative

Impact B-AQ-1: Criteria Pollutant Impacts During Construction

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction of the One-for-One Replacement Alternative would generate fugitive dust and criteria air pollutants, which would violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (Less than Significant with Mitigation)

Construction emissions under the One-for-One Replacement Alternative were calculated using the same methodology as for the proposed project. The difference in emissions is attributable to reduced square footage of construction. The emissions from the off-road construction equipment are calculated by scaling down the activities that would be affected by the reduced gross square footage of the alternative by the ratio of the alternative square footage to the project square footage.

It was assumed that the One-for-One Replacement Alternative would have approximately the same amount of new pavement. The architectural coating emissions for each construction phase however were scaled by the ratio of alternative gross square footage over project gross square footage.

Construction activity under the One-for-One Replacement Alternative would be condensed and occur earlier than the proposed project and, consequently, the off-road equipment fleet and vehicle trip fleet would not have the emissions improvements that are assumed for the proposed project or the Reduced Development/Density Alternative.

Criteria pollutant emissions of the One-for-One Replacement Alternative from use of construction equipment and other construction-related sources are quantified by phase in **Table 4.10-16**, which shows unmitigated emission results. Mitigated emission results are presented in **Table 4.10-17**.

Unmitigated emissions of the One-for-One Replacement Alternative would be less than those of the proposed project; therefore, mitigated emissions of this alternative would also be less than those of the proposed project. Unmitigated emissions would exceed the NO_x thresholds during Phase 1 and Phase 2 construction. Consequently, **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** would also be required for the One-for-One Replacement Alternative to reduce NO_x emissions associated with construction.

Construction-related emissions of NO_x under the One-for-One Replacement Alternative would be *less than significant with mitigation*.

**TABLE 4.10-16
UNMITIGATED AVERAGE DAILY AND MAXIMUM ANNUAL EMISSIONS
FOR ONE-FOR-ONE REPLACEMENT ALTERNATIVE**

	Average Daily Emissions (lb/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	20	83	3.8	3.8
Phase 2 Construction	22	86	3.9	3.9
Phase 3 Construction	16	52	2.3	2.3
Threshold	54	54	82	54
Exceeds Threshold?	No	Yes	No	No

Year	Maximum Annual Emissions (Ton/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	4.2	11	0.69	0.69
Phase 2 Construction	4.2	8.6	0.71	0.71
Phase 3 Construction	1.7	1.4	0.42	0.42
Threshold	10	10	15	10
Exceeds Threshold?	No	Yes	No	No

SOURCE: ENVIRON, 2014.

**TABLE 4.10-17
MITIGATED AVERAGE DAILY AND MAXIMUM ANNUAL EMISSIONS
FOR ONE-FOR-ONE REPLACEMENT ALTERNATIVE**

	Average Daily Emissions (lb/day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	14	41	2.3	2.3
Phase 2 Construction	17	42	2.4	2.4
Phase 3 Construction	13	36	2.1	2.0
Threshold	54	54	82	54
Exceeds Threshold?	No	No	No	No

Year	Maximum Annual Emissions (Ton/year)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Phase 1 Construction	2.6	7.5	0.42	0.42
Phase 2 Construction	3.1	7.7	0.44	0.44
Phase 3 Construction	2.4	6.6	0.38	0.37
Threshold	10	10	15	10
Exceeds Threshold?	No	No	No	No

SOURCE: ENVIRON, 2014.

Summary of Impact B-AQ-1

Estimated emissions of criteria air pollutants indicate that average daily construction emissions of ROG, PM₁₀, and PM_{2.5} during the One-for-One Replacement Alternative would be below the applicable BAAQMD thresholds. Emissions of NOx, however, would exceed the applicable BAAQMD threshold. Implementation of Mitigation Measure M-AQ-1 (Construction Emissions

Minimization) would reduce NO_x emissions and the resultant emissions would not exceed the applicable threshold, and the construction-related impact due to emissions of NO_x would be *less than significant with mitigation*.

Impact B-AQ-1 would be *less than significant with mitigation* under CEQA.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.

Impact B-AQ-2: Criteria Pollutant Impacts During Operation

NEPA: This topic is not analyzed under NEPA.

CEQA: During One-for-One Replacement Alternative operations, the proposed project would not result in emissions of criteria air pollutants at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (No Impact)

The transportation analysis shows that operation of the One-for-One Replacement Alternative would have the same vehicle trip generation as what currently exits from the project site and there would be no increase in mobile emissions. Area source emissions from consumer products and landscape maintenance equipment and architectural coatings would also remain the same as current conditions given the same number of residential units. There would be a slight decrease in energy emissions from natural gas combustion for water and space heating given increased building efficiencies, but this reduction would be minor (less than 1 pound per day). Consequently, there would be *no impact* under CEQA with regard to operational criteria air pollutant emissions under the One-for-One Replacement Alternative.

Mitigation: None required.

Impact B-AQ-3: Toxic Air Contaminants

NEPA: This topic is not analyzed under NEPA.

CEQA: Construction and operation of the One-for-One Replacement Alternative would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations. (Less than Significant with Mitigation)

The estimated health risks and annual average PM_{2.5} concentrations from construction of the One-for-One Replacement Alternative for the unmitigated scenario is presented in **Table 4.10-18** for off-site receptors and in **Table 4.10-19** for on-site receptors. Unmitigated health risks and annual average PM_{2.5} concentrations from construction of the One-for-One Replacement Alternative would be less than those of the proposed project.

Implementation of **Mitigation Measure M-AQ-1 (Construction Emissions Minimization)** would reduce the impacts from standardized construction equipment for which “tiered” equipment is available. Construction-related emissions of DPM would be reduced by as much as 85 percent

TABLE 4.10-18
UNMITIGATED CUMULATIVE CANCER RISK AND PM_{2.5} CONCENTRATION
FOR THE ONE-FOR-ONE REPLACEMENT ALTERNATIVE AT OFF-SITE MEISR

Source	Lifetime Excess Cancer Risk (in one million)	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	6.9	8.2
Construction Total	139	0.80
Cumulative Total	146	9.0

SOURCE: ENVIRON, 2014

TABLE 4.10-19
MITIGATED CUMULATIVE CANCER RISK AND PM_{2.5} CONCENTRATION
FOR THE ONE-FOR-ONE REPLACEMENT ALTERNATIVE AT ON-SITE MEISR

Source	Lifetime Excess Cancer Risk in one million	PM _{2.5} Concentration (µg/m ³ , Annual Average)
Background	35.7	8.6
Construction Total ^a	26/47	0.10/0.18
Cumulative Total^a	68/89	8.7/8.8

^a Totals provide a range of values, the first of which is the mean value and the second of which is the mean plus one standard deviation.

SOURCE: ENVIRON, 2014

during Phase 1 with mitigation and the resultant cumulative cancer risk would no longer exceed the applicable threshold. This reduction is entirely attributable to the requirement for construction equipment to use Tier 2 engines and Level 3 VDECS. Mitigated risk and PM_{2.5} concentration values with implementation of **Mitigation Measure M-AQ-1** from construction of the One-for-One Replacement Alternative would be less than those of the proposed project and would therefore be less than significant.

Summary of Impact B-AQ-3

Construction of the One-for-One Replacement Alternative would generate emissions of toxic air contaminants, including DPM. The health risk assessment conducted indicated that without mitigation, the project would exceed the significance threshold for increased cancer risk and would be a significant impact. Annual average concentrations of PM_{2.5} would be below 10 µg/m³ and would be less than significant without mitigation. With implementation of Mitigation Measure M-AQ-1 (Construction Emissions Minimization), impacts related to increased cancer risk would be reduced to less than significant. Therefore, this impact of the One-for-One Replacement Alternative would be *less than significant with mitigation* under CEQA because construction and operation of the alternative would generate toxic air contaminants, including diesel particulate matter, which would expose sensitive receptors to substantial pollutant concentrations, but emissions would be reduced to a less-than-significant level through implementation of identified mitigation.

Mitigation Measure M-AQ-1: Construction Emissions Minimization.***Impact B-AQ-4: Clean Air Plan***

NEPA: This topic is not analyzed under NEPA.

CEQA: The One-for-One Replacement Alternative would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (Less than Significant)

The One-for-One Replacement Alternative would generally replace existing uses at the project site with equivalent uses at a higher energy efficiency. Modern building codes would require the alternative to include implement energy-saving measures not currently incorporated into the existing development, which would reduce emissions as compared to existing conditions.

In addition, transportation control measures that are identified in the 2010 Clean Air Plan are implemented by the *San Francisco General Plan* and the *Planning Code*, for example, through the City's Transit First Policy, bicycle parking requirements, and transit impact development fees applicable to the One-for-One Replacement Alternative. By complying with these applicable requirements, the One-for-One Replacement Alternative would include relevant transportation control measures specified by the 2010 Clean Air Plan.

Therefore, the proposed project would not conflict with, or obstruct implementation of the 2010 Clean Air Plan, and this impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact B-AQ-5: Odors

NEPA: This topic is not analyzed under NEPA.

CEQA: The One-for-One Replacement Alternative would not create objectionable odors that would affect a substantial number of people. (Less than Significant)

Construction of the One-for-One Replacement Alternative would emit diesel exhaust from construction equipment would generate some odors. These odors would be similar to the odors that would be generated under construction of the proposed project and Alternative A, but for a shorter duration.

The existing 785 residential units on the project site would be replaced. The alternative would not involve operation of odor sources of concern. As under existing conditions, the project site would not be substantially affected by sources of odors.²⁵

Therefore, odor impacts would be *less than significant* under CEQA.

²⁵ An ESA air quality and noise analyst conducted noise monitoring on April 24th and 25th 2013 during which observations regarding wind, cloud cover and the absence of noticeable odors were also noted.

Impact B-AQ-6: Clean Air Act

NEPA: The One-for-One Replacement Alternative would not generate federal non-attainment criteria pollutants or their precursors in quantities that would trigger the need for a general conformity assessment. (Less than Significant)

CEQA: This topic is not analyzed under CEQA.

In relation to the NAAQS, the project site is located in an air basin designated as a nonattainment area for the 8-hour ozone and 24-hour PM_{2.5} standards and as a maintenance area for the CO standard.²⁶ Section 176(c) of the CAA, also known as the General Conformity requirements, requires federal agencies to ensure that actions undertaken in nonattainment or maintenance areas are consistent with the CAA and SIPs.

Table 4.10-20 shows the relevant conformity thresholds, and maximum estimated emissions considering both construction and operations under the One-for-One Replacement Alternative. As there would be no net increase in operational emissions associated with the One-for-One Replacement Alternative, all emissions would result from construction. As shown in Table 4.10-20, the One-for-One Replacement Alternative would not exceed the applicability (de minimis) thresholds for General Conformity; therefore, the Reduced Development/Density Alternative would not violate or contribute to new violations of the NAAQS, would not increase the frequency or severity of existing violations of the NAAQS, and would not delay timely attainment of the NAAQS for ozone or PM_{2.5} and a formal General Conformity determination is not required. This impact is considered *less than significant* under NEPA.

Mitigation: None required.

**TABLE 4.10-20
GENERAL CONFORMITY APPLICABILITY ASSESSMENT -
REDUCED DEVELOPMENT/DENSITY ALTERNATIVE (tons per year, unmitigated)**

Criteria Air Pollutant	Conformity Applicability (de minimis) Threshold for SFBAAB	Maximum Project Emissions and phase of occurrence
Ozone precursors (NOx)	100	4.0 (Phase 2 construction)
Ozone precursor (VOC)	100	16 (Phase 2 construction)
PM _{2.5}	100	0.7 (Phase 2 construction)
CO	100	9.3 (Phase 2 construction)

²⁶ BAAQMD, Air Quality Standards and Attainment Status, available online at: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed April 20, 2011.

Alternative C: No Action Alternative

Under the No Action Alternative, there would be no construction or associated construction equipment or vehicle emissions. Operations would continue as under existing conditions, and there would be no net increase in pollutant emissions. Therefore, the No Action Alternative would have *no impacts* under NEPA or CEQA.

4.10.3 Mitigation Measures

Mitigation Measure M-AQ-1: Construction Emissions Minimization

- A. *Construction Emissions Minimization Plan.* Prior to issuance of a construction permit, the project sponsor shall submit a Construction Emissions Minimization Plan (Plan) to the Environmental Review Officer (ERO) for review and approval by an Environmental Planning Air Quality Specialist. The Plan shall detail project compliance with the following requirements:
1. All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:
 - a) Where access to alternative sources of power are available, portable diesel engines shall be prohibited;
 - b) All off-road equipment shall have:
 - i. Engines that meet or exceed either U.S. Environmental Protection Agency (U.S. EPA) or California Air Resources Board (ARB) Tier 3 off-road emission standards, and
 - ii. Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS).²⁷
 - c) Exceptions:
 - i. Exceptions to A(1)(a) may be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that an alternative source of power is limited or infeasible at the project site and that the requirements of this exception provision apply. Under this circumstance, the sponsor shall submit documentation of compliance with A(1)(b) for onsite power generation.
 - ii. Exceptions to A(1)(b)(ii) *may* be granted if the project sponsor has submitted information providing evidence to the satisfaction of the ERO that a particular piece of off-road equipment with an ARB Level 3 VDECS is: (1) technically not feasible, (2) would not produce desired emissions reductions due to expected operating modes, (3) installing the control device would create a safety hazard or impaired visibility for the

²⁷ Equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required.

operator, or (4) there is a compelling emergency need to use off-road equipment that are not retrofitted with an ARB Level 3 VDECS and the sponsor has submitted documentation to the ERO that the requirements of this exception provision apply. If granted an exception to A(1)(b)(ii), the project sponsor must comply with the requirements of A(1)(c)(iii).

- iii. If an exception is granted pursuant to A(1)(c)(ii), the project sponsor shall provide the next cleanest piece of off-road equipment as provided by the step down schedules in **Table M-AQ-1-1** and shall provide documentation that emissions are sufficiently reduced to ensure criteria air pollutants, excess cancer risks and PM2.5 concentrations do not exceed significance criteria.

TABLE M-AQ-1-1
OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

Compliance Alternative	Engine Emission Standard	Emissions Control
1	Tier 2	ARB Level 3 VDECS
2	Tier 2	ARB Level 2 VDECS
3	Tier 2	ARB Level 1 VDECS

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.

2. The project sponsor shall require the idling time for off-road and on-road equipment be limited to no more than two minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, Chinese) in designated queuing areas and at the construction site to remind operators of the two minute idling limit.
3. The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer specifications.
4. The Plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include, but is not limited to: equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. For off-road equipment using alternative fuels, reporting shall indicate the type of alternative fuel being used.
5. The Plan shall be kept on-site and available for review by any persons requesting it and a legible sign shall be posted at the perimeter of the construction site indicating to the public the basic requirements of the Plan and a way to request a copy of the Plan. The project sponsor shall provide copies of Plan to members of the public as requested.

- B. *Reporting.* Quarterly reports shall be submitted to the ERO indicating the construction phase and off-road equipment information used during each phase including the information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

Within six months of the completion of construction activities, the project sponsor shall submit to the ERO a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). In addition, for off-road equipment using alternative fuels, reporting shall include the actual amount of alternative fuel used.

- C. *Certification Statement and On-site Requirements.* Prior to the commencement of construction activities, the project sponsor must certify (1) compliance with the Plan, and (2) all applicable requirements of the Plan have been incorporated into contract specifications.

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4.11 Greenhouse Gas Emissions

4.11.1 Regulatory Framework

Federal Regulations

U.S. Environmental Protection Agency (USEPA)

On April 2, 2007, in *Massachusetts v. USEPA*, 549 US 497, the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the USEPA must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the USEPA is required to follow the language of Section 202(a) of the CAA.

On April 17, 2009, the USEPA Administrator signed proposed “endangerment” and “cause or contribute” findings for GHGs under Section 202(a) of the CAA. The USEPA held a 60-day public comment period, considered public comments, and issued final findings. The USEPA found that six GHGs taken in combination endanger both the public health and the public welfare of current and future generations. The USEPA also found that the combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse effect as air pollution that endangers public health and welfare under CAA Section 202(a) (USEPA, 2013b).

Specific GHG regulations that the USEPA has adopted to date are as follows:

40 CFR Part 98. Mandatory Reporting of Greenhouse Gases Rule. This rule requires mandatory reporting of GHG emissions for facilities that emit more than 25,000 metric tons of CO₂e emissions per year.

40 CFR Part 52. Proposed Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. USEPA has mandated that Prevention of Significant Deterioration (PSD) and Title V requirements applies to facilities whose stationary source CO₂e emissions exceed 100,000 tons per year. The proposed project would not trigger PSD or Title V permitting under this regulation.

State Regulations

Executive Order S-3-05

Executive Order (EO) S-3-05, sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million MTCO₂E); by 2020, reduce emissions to 1990 levels (estimated at 427 million MTCO₂E); and by 2050 reduce emissions to 80 percent below 1990 levels (approximately 85 million MTCO₂E). As discussed in the Environmental Setting section (Section 3.11), California produced about 452 million MTCO₂E in 2010, thereby meeting the 2010 target date to reduce GHG emissions to 2000 levels.

Assembly Bill 32 and California Climate Change Scoping Plan

In 2006, the California legislature passed Assembly Bill No. 32 (*California Health and Safety Code* Division 25.5, Sections 38500, et seq., or AB 32), also known as the California 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 the goals of AB 32, California must reduce its GHG emissions by 30 percent below projected 2020 business as usual emissions levels, about 15 percent below 2008 levels.¹ The Scoping Plan estimates a reduction of 174 million MTCO₂E from the transportation, energy, agriculture, forestry, and other high global warming sectors, see **Table 4.1-1: GHG Reductions from the AB 32 Scoping Plan Sectors.**²

The AB 32 Scoping Plan also anticipates that local government actions will result in reduced GHG emissions because they have the primary authority to plan, zone, approve, and permit development to accommodate population growth and the changing needs of their jurisdictions.³ The Scoping Plan also relies on the requirements of Senate Bill (SB) 375 (discussed below) to align local land use and transportation planning for achieving GHG reductions.

The Scoping Plan must be updated every five years to evaluate AB 32 policies and ensure that California is on track to achieve the 2020 GHG reduction goal. In early 2013, ARB initiated activities to update the AB 32 Scoping Plan and a Final Scoping Plan Update. The Update, published in 2014, lays out a set of new actions, including specific recommended actions with lead agency assignments and anticipated due dates. Some of the actions are near-term, while others are focused on longer-term efforts. The Update encourages a change and trend toward more dense urban development designed to minimize energy consumption, waste output, air pollution, and water pollution. The proposed project is designed to meet these goals. According to the ARB, the State is currently on track to meet its 2020 GHG emission reduction goals.^{4,5}

Senate Bill 375

The Scoping Plan also relies on the requirements of Senate Bill 375 (SB 375), also known as the Sustainable Communities and Climate Protection Act of 2008, to reduce carbon emissions from land use decisions. 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 that will then achieve GHG emission

¹ ARB. "California's Climate Plan: Fact Sheet." Available online at: http://www.arb.ca.gov/cc/facts/scoping_plan_fs.pdf. Accessed August 23, 2012 (2012a).

² *Ibid.*

³ ARB, 2008.

⁴ ARB, "AB 32 Scoping Plan," July 3, 2013. Available online at: <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>. Accessed July 16, 2013.

⁵ ARB, "First Update to the Climate Change Scoping Plan," Available online at: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf. Accessed November 13, 2014.

TABLE 4.11-1
GHG REDUCTIONS FROM THE AB 32 SCOPING PLAN SECTORS^{6,7}

GHG Reduction Measures By Sector	GHG Reductions (million MT CO₂E)
Transportation Sector	62.3
Electricity and Natural Gas	49.7
Industry	1.4
Landfill Methane Control Measure (Discrete Early Action)	1
Forestry	5
High Global Warming Potential GHGs	20.2
Additional Reductions Needed to Achieve the GHG Cap	34.4
Total	174
Other Recommended Measures	
Government Operations	1 - 2
Methane Capture at Large Dairies	1
Additional GHG Reduction Measures:	
Water	4.8
Green Buildings	26
High Recycling/ Zero Waste Commercial Recycling Composting Anaerobic Digestion Extended Producer Responsibility Environmentally Preferable Purchasing	9
Total	41.8-42.8
MTCO ₂ E = metrics tons of carbon dioxide equivalent	

reduction targets set by ARB. For the Bay Area, the per-capita GHG emission reduction target is a seven percent reduction by 2020 and a 15 percent reduction by 2035 from 2005 levels. The Metropolitan Transportation Commission's 2013 Regional Transportation Plan, Plan Bay Area, adopted in July 2013, is the region's first plan subject to SB 375 requirements.

Senate Bill 1078, 107, and X1-2 and Executive Order S-14-08 and S-21-09

California established aggressive Renewable Portfolio Standards under SB 1078 (Chapter 516, Statutes of 2002) and SB 107 (Chapter 464, Statutes of 2006), which require retail sellers of electricity to provide at least 20 percent of their electricity supply from renewable sources by 2010. EO S-14-08 (November 2008) expanded the State's Renewable Portfolio Standard from 20 percent to 33 percent of electricity from renewable sources by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing EO S-21-09,

⁶ ARB. Climate Change Scoping Plan, December 2008. Available online at: http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf. Accessed August 21, 2012.

⁷ ARB. 2012a.

which directed ARB to enact regulations to help California meet the Reviewable Portfolio Standard goal of 33 percent renewable energy by 2020.⁸

To codify the GHG reduction goal of 33 percent by 2020 for energy suppliers, SB X1-2 (Chapter 1, Statutes of 2011) was signed by Governor Edmund G. Brown, Jr., in April 2011. This Renewable Portfolio Standard preempts the ARB's 33 percent renewable sources electricity standard and applies to all electricity suppliers (not just retail sellers) in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new Renewable Portfolio Standard goals of 20 percent of retail sales from renewable sources by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020.⁹ Eligible renewable sources include geothermal, ocean wave, solar photovoltaic, and wind, but exclude large hydroelectric (30 MW or more). Therefore, any non-hydroelectric sources of electricity provided by the SFPUC are required to be 100 percent renewable.¹⁰

Regional

The BAAQMD is responsible for attaining and maintaining federal and state air quality standards in the SFBAAB, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the 2010 Clean Air Plan, includes a goal of reducing GHG emission to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

In addition, BAAQMD established a climate protection program to reduce pollutants that contribute to global climate change and affect air quality in the SFBAAB; the program includes GHG-reduction measures that promote energy efficiency, reduce vehicle miles traveled, and develop alternative energy sources.¹¹

The BAAQMD also assists lead agencies in complying with the requirements of CEQA regarding potentially adverse impacts to air quality in their CEQA Air Quality Guidelines. The BAAQMD advises lead agencies to consider adopting a Greenhouse Gas Reduction Strategy capable of meeting AB 32 goals and then reviewing projects for compliance with the Greenhouse Gas Reduction Strategy as a CEQA threshold of significance.¹² This is consistent with the approach to analyzing GHG emissions in the CEQA Guidelines Section 15183.5.

⁸ California Energy Commission, "Renewables Portfolio Standard (RPS) Proceeding." Available online at: <http://www.energy.ca.gov/portfolio/>. Accessed June 10, 2013.

⁹ *Ibid.*

¹⁰ SFPUC, 2011.

¹¹ BAAQMD, "Climate Protection Program." Available online at: http://www.baaqmd.gov/?sc_itemid=83004271-3753-4519-8B09-D85F3FC7AE70. Accessed August 23, 2012.

¹² BAAQMD, California Environmental Quality Act Air Quality Guidelines, May 2012. Available online at: http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_Final_May%202012.ashx?la=en. Accessed September 25, 2012.

Local

San Francisco Greenhouse Gas Reduction Ordinance

In May 2008, the City adopted Ordinance No. 81-08 amending the *San Francisco Environment Code* to establish GHG emissions targets and departmental action plans and to authorize the San Francisco Department of the Environment to coordinate efforts to meet these targets. The City ordinance establishes the following GHG emissions reduction limits and target dates by which to achieve them: determine 1990 Citywide 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; and reduce GHG emissions by 80 percent below 1990 levels by 2050.

San Francisco Greenhouse Gas Reduction Strategy

San Francisco has developed a number of plans and programs to reduce the City's contribution to global climate change and meet the goals of the City's Greenhouse Gas Reduction Ordinance. San Francisco's Greenhouse Gas Reduction Strategy documents its actions to pursue cleaner energy, energy conservation, alternative transportation and solid waste policies. For instance, the City has implemented mandatory requirements and incentives that have measurably reduced GHG emissions including, but not limited to, increasing 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 a mandatory recycling and composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions.

San Francisco's policies and programs have resulted in a reduction in GHG emissions to below 1990 levels, exceeding statewide AB 32 GHG reduction goals. As stated above, San Francisco GHG emissions in 2010 were 5.3 million MTCO₂E, which represents a 14.5 percent reduction in GHG emissions compared to 1990 levels (6.2 million MTCO₂E). The reduction is largely a result of reduced GHG emissions from the electricity sector, from 2.0 million MTCO₂E (1990) to 1.3 million MTCO₂E (2010), and waste sector, from 0.5 million MTCO₂E (1990) to 0.2 million MTCO₂E (2010).¹³

¹³ DOE, 2013.

4.11.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For public services the analysis considers whether the proposed project would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year.

Significance Criteria under CEQA

The proposed project and alternatives 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.

Approach to Analysis

GHG emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects have contributed and will contribute to global climate change and its associated environmental impacts.

The BAAQMD has prepared guidelines and methodologies for analyzing GHGs. These guidelines are consistent with CEQA Guidelines Sections 15064.4 and 15183.5 which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of greenhouse gases and describes the required contents of such a plan. Accordingly, San Francisco has prepared its own Greenhouse Gas Reduction Strategy (described above), which the BAAQMD has reviewed and concluded that "Aggressive GHG reduction targets and comprehensive strategies like San Francisco's 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."¹⁴

Given that the City's local greenhouse gas reduction targets are more aggressive than the State and Region's 2020 GHG reduction targets and consistent with the long-term 2050 reduction targets, the City's Greenhouse Gas Reduction Strategy is consistent with the goals of EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan. Therefore, proposed projects that are consistent

¹⁴ BAAQMD. Letter from J. Roggenkamp, BAAQMD, to B. Wycko, San Francisco Planning Department, October 28, 2010. Available online at: http://www.sf-planning.org/ftp/files/MEA/GHG-Reduction_Letter.pdf. Accessed September 24, 2012.

with the City's Greenhouse Gas Reduction Strategy would be consistent with the goals of EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan, would not conflict with these plans, and would therefore not exceed San Francisco's applicable GHG threshold of significance.

The following analysis of the proposed project's impact on climate change focuses on the project's contribution to cumulatively significant GHG emissions. Given the analysis is in a cumulative context, this section does not include an individual project-specific impact statement.

Project Features

The project site is approximately 48.8 acres, and is located on a site with access to express and local SFMTA bus service. The proposed project would demolish existing buildings, including 785 family and senior dwelling units in 94 two-story residential buildings. Demolition would remove 765,000 square feet of residential uses and 29,000 square feet of daycare and other community-serving uses. The proposed project would construct up to 1,700 units of housing, including public housing replacement units, affordable rental units and market rate and affordable for-sale units; construct approximately 72,500 square feet of community service, recreational and educational facilities; construct 11.5 acres of new parks and open spaces, including a community garden, a farmer's market pavilion and secure outdoor courtyards within residential buildings; construct 12.2 acres of a new and reconfigured street network potentially including "green" features such as bioswales and landscaping; and construct up to 16,200 square feet of neighborhood-serving retail structures.

The project sponsor would comply with requirements to provide Class I and Class II bicycle parking spaces and car-share parking spaces. In addition, the proposed project would include energy-efficiency features that would exceed Title 24 requirements.

Proposed Project

Impact GG-1: Cumulative Greenhouse Gas Effects

NEPA: The proposed project would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year. (Less than Significant)

CEQA: The proposed project would generate greenhouse gas emissions, but not at 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)

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 waste removal, disposal, and landfill operations.

General Impacts

The proposed project would increase the activity on site by replacing existing residential and community-serving uses with a greater number of residential units as well as community-serving and retail uses. 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 that result in an increase in energy use, water use and wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions.

The proposed project would be subject to and required to comply with several regulations adopted to reduce GHG emissions as identified in the GHG Reduction Strategy. The regulations that are applicable to the proposed project include the Commuter Benefits Ordinance, Emergency Ride Home Program, Bicycle Parking requirements, Street Tree Planting Requirements for New Construction, Mandatory Recycling and Composting Ordinance, SF Green Building Requirements for Energy Efficiency, and Stormwater Management. For example, regarding bicycle parking, the project would adhere to *Planning Code* Section 155 by providing adequate bicycle parking for both retail and residential uses, as well as adhere to the car-sharing requirements in *Planning Code* Section 166. Regarding energy efficiency, the project received a conditional LEED® (Leadership in Energy Efficient Design) ND (Neighborhood Development) Gold Certification in 2011. The project sponsor intends to construct the project to these standards. And regarding stormwater management, the SFPUC has made the determination that the Sunnydale-Velasco project will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; whereby the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events.

These regulations, as outlined in San Francisco's *Strategies to Address Greenhouse Gas Emissions*, have proven effective as San Francisco's GHG emissions have measurably reduced when compared to 1990 emissions levels, demonstrating that the City has met and exceeded EO S-3-05, AB 32, and the Bay Area 2010 Clean Air Plan GHG reduction goals for the year 2020. The proposed project was determined to be consistent with San Francisco's GHG Reduction Strategy.¹⁵ Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. Therefore, the proposed project's GHG emissions would not conflict with state, regional, and local GHG reduction plans and regulations, and thus the proposed project's contribution to GHG emissions would not be cumulatively considerable or generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment. As such, the proposed project would result in a less-than-significant impact with respect to GHG emissions. No mitigation measures are necessary.

¹⁵ Greenhouse Gas Analysis: Compliance Checklist. October 8, 2013. This document is on file and available for public review as part of Case File No. 2010.0305E.

In February 2010, the Council on Environmental Quality (CEQ) provided a draft guidance memorandum on consideration the effects of climate change and greenhouse gas emissions (GHG) in NEPA documentation¹⁶. This document identifies the Clean Air Act reporting requirement of 25,000 metric tons (MT) or more of carbon dioxide equivalents (CO₂E) as an indication that greenhouse gas emissions could be considered as potential adverse impact of a federal action but specifies that the reporting requirement should not, necessarily, be used as a threshold.

GHG emissions associated with the project were calculated using the CalEEMod emissions estimator model. Project emissions are presented in **Table 4.11-2**. Project GHG emissions would be 5,058 metric tons of carbon dioxide equivalents per year, which would be about 20 percent of the Clean Air Act reporting limit of 25,000 metric tons per year. Therefore the project would not have an adverse effect on global GHG emissions and climate change with respect to NEPA.

**TABLE 4.11-2
MAXIMUM ANNUAL GREENHOUSE GAS EMISSIONS FOR THE PROPOSED PROJECT**

Source	Emissions (metric tons CO ₂ E per year)
Unmitigated Emissions	
Motor Vehicle Trips	3,146
Energy	1,439
Solid Waste	225
Other Sources (i.e., Area Sources, Water/Wastewater)	232
Stationary Source (Generator)	16
Total Unmitigated Operational GHG Emissions	5,058
Clean Air Act Reporting Limit	25,000
Significant (Yes or No)?	No

Summary

The proposed project would be required to comply with a number of local requirements including the provision of bicycle parking spaces, fuel-efficient vehicle parking, energy efficiency requirements, water conservation measures, and waste reduction and recycling, and as a result would be consistent with San Francisco's GHG Reduction Strategy. Moreover, the project would result in emission of a total of 5,058 metric tons of CO₂E annually, which would be about 20 percent of the Clean Air Act reporting limit of 25,000 metric tons per year.

The impact would be *less than significant* under NEPA because the proposed project would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year.

¹⁶ Council on Environmental Quality (CEQ). *Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions*, 2010.

The impact would be *less than significant* under CEQA because the proposed project would generate greenhouse gas emissions, but not at 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.

Mitigation: None required.

Proposed Project Variant

The Project variant would maintain the same building envelope (i.e., same number of buildings in approximately the same size and configuration) as the proposed project. Consequently, construction related GHG emissions of the variant would be largely the same as those from the proposed project. From an operational standpoint, the transportation analysis states that the variant would generate the same number of net new vehicle trips as the proposed project, as well as distribute and assign these trips as described for the proposed project. As a result, the operational mobile GHG emissions of the variant would be the same as the proposed project. The marginal reduction in the number of residential units would result in little, if any, reduction in the energy source or area source GHG emissions.

The project variant would also be required to comply with the local requirements outlined above that would reduce GHG emissions. Therefore the project variant would also be consistent with San Francisco's GHG Reduction Strategy. Consequently, implementation of the project variant would also not result in a cumulatively considerable contribution to significant cumulative GHG impacts, and the impact would be *less than significant* under both CEQA and NEPA.

Mitigation: None required.

Alternative A: Reduced Development / Density Alternative

Impact A-GG-1: Cumulative Greenhouse Gas Effects

NEPA: The Reduced Development / Density Alternative would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO_{2e}) per year. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would generate greenhouse gas emissions, but not at 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 Reduced Development / Density Alternative would increase the activity on the project site, but to a slightly lesser extent than the proposed project. Therefore, Alternative A would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and the energy use, water use, wastewater treatment, and solid waste disposal associated with residential, community, and commercial operations. Construction activities

would also result in a temporary increase in GHG emissions. The Reduced Development / Density Alternative would implement the transportation, energy efficiency, renewable energy, waste reduction, and conservation features required by the City's *Strategies to Address Greenhouse Gas Emissions*.

GHG emissions associated with the Reduced Development / Density Alternative were calculated using the CalEEMod emissions estimator model. Emissions are presented in **Table 4.11-3**. Project GHG emissions would be 3,464 metric tons of carbon dioxide equivalents per year, which would be less than 14 percent of the Clean Air Act reporting limit of 25,000 metric tons per year. Therefore the project would not have an adverse effect on global GHG emissions and climate change with respect to NEPA.

**TABLE 4.11-3
MAXIMUM ANNUAL GREENHOUSE GAS EMISSIONS
FOR THE REDUCED DEVELOPMENT / DENSITY ALTERNATIVE**

Source	Emissions (metric tons CO ₂ e per year)
<i>Unmitigated Emissions</i>	
Motor Vehicle Trips	2,162
Energy	975
Solid Waste	156
Other Sources (i.e., Area Sources, Water/Wastewater)	154
Stationary Source (Generator)	16
Total Unmitigated Operational GHG Emissions	3,464
<i>Clean Air Act Reporting Limit</i>	25,000
<i>Significant (Yes or No)?</i>	No

The Reduced Development / Density Alternative would be required to comply with a number of local requirements including the provision of bicycle parking spaces, fuel-efficient vehicle parking, energy efficiency requirements, water conservation measures, waste reduction and recycling, low VOC building materials, and requirements for planting street trees. Therefore the Reduced Development / Density Alternative would also be consistent with San Francisco's GHG Reduction Strategy. Consequently, implementation of the Reduced Development / Density Alternative would not result in a cumulatively considerable contribution to significant cumulative global climate change impacts.

The impact would be *less than significant* under NEPA because the alternative would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year.

The impact would be *less than significant* under CEQA because the alternative would generate greenhouse gas emissions, but not at 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.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-GG-1: Cumulative Greenhouse Gas Effects

NEPA: The One-for-One Replacement Alternative would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year. (No Impact)

CEQA: The One-for-One Replacement Alternative would generate greenhouse gas emissions, but not at 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. (No Impact)

Construction activities would result in a temporary increase in GHG emissions. Construction activities would comply with the City's Construction and Demolition Debris Recovery Ordinance as well as the San Francisco Green Building Requirements for construction and demolition debris recycling (*San Francisco Building Code*, Chapter 13C).

The operation of the One-for-One Replacement Alternative would have the same vehicle trip generation as what currently exists from the project site and there would be no increase in mobile emissions. Area source emissions from consumer products and landscape maintenance equipment and architectural coatings would also remain the same as current conditions given the same number of residential units. There would be a slight decrease in energy emissions from electricity and natural gas combustion for water and space heating given increased building efficiencies.

There would be *no impact* under NEPA because the alternative would generate greenhouse gas emissions, but not to the level that would exceed the Clean Air Act Reporting Limit of 25,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year.

There would be *no impact* under CEQA because the alternative would generate greenhouse gas emissions, but not at 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.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, no construction or change in existing uses at the Project Site are proposed. There are existing uses at the Project Site which generate operational emissions, such as resident vehicle trips; however, there would be no change to the existing level of emissions. Thus, overall effects from the No Action Alternative would have *no impact* under both CEQA and NEPA.

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4.12 Wind and Shadow

4.12.1 Local Regulatory Framework

Wind

In order to provide a comfortable wind environment for people in San Francisco, the City has established wind safety and comfort criteria to be used in the evaluation of large proposed buildings. Section 148 of the *Planning Code* specifically outlines these criteria for the Downtown Commercial (C-3) Districts, while other *Planning Code* sections apply the same criteria to the Rincon Hill, Van Ness Avenue, and South of Market areas. Under Section 148, “buildings and additions to existing buildings shall be shaped, or other wind-baffling measures shall be adopted, so that the developments will not cause ground-level wind currents to exceed, more than 10 percent of the time year round, between 7:00 a.m. and 6:00 p.m., the comfort level of 11 m.p.h. equivalent wind speed in areas of substantial pedestrian use and seven m.p.h. equivalent wind speed in public seating areas.” No buildings are permitted that causes equivalent wind speeds to reach or exceed the “wind hazard” level of 26 m.p.h. for a single hour of the year.

These *Planning Code* sections primarily address areas of the city that contain high-rise buildings, because wind impacts are generally caused by tall buildings that extend substantially above their surroundings, and by large buildings in open, windy sites. Therefore, this *Planning Code* section is not applicable to the project site.

Shadow

Section 295 of the *Planning Code*, the Sunlight Ordinance, generally prohibits the issuance of building permits for structures or additions to structures greater than 40 feet in height that would create new shadow on property under the jurisdiction of or designated to be acquired by the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset. Section 295(b) states that the Planning Commission, following a public hearing, “shall disapprove” any project governed by this section that would have an “adverse effect on the use of the property” due to shading of a park subject to Section 295, “unless it is determined that the impact would be insignificant.” The Planning Commission’s decision under Section 295 cannot be made “until the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission has had an opportunity to review and comment to the City Planning Commission upon the proposed project.” Under the criteria adopted by the Planning and Recreation and Park Commissions in 1989, 14 downtown parks were assigned Absolute Cumulative Limits, which represent the maximum percentage of new shadow, expressed as a percentage of Theoretical Annual Available Sunlight,¹ allowable beyond

¹ The theoretical annual available sunlight is the amount of sunlight, measured in square-foot-hours, that would fall on a given park during the hours covered by Section 295. It is computed by multiplying the area of the park by 3,721.4, which is the number of hours in the year subject to Section 295. Thus, this quantity is not affected by shadow cast by existing buildings, but instead represents the amount of sunlight that would be available with no buildings in place. Theoretical annual available sunlight calculations for each downtown park were used by the Planning and Recreation and Park Commissions in establishing the allowable Absolute Cumulative Limit for downtown parks in 1989.

existing conditions. For projects that would affect parks for which a quantitative limit was established, shadow impacts have typically been judged less than significant if the project would not exceed the Absolute Cumulative Limit.

The 1989 criteria set forth different recommendations for parks greater than 2 acres, which are considered larger parks. For larger parks that are shadowed less than 20 percent of the time during the year, an additional 1.0 percent of shadow is recommended as permitted if the specific shadow meets the additional qualitative criteria. Qualitatively, shadow impacts are evaluated based on (1) existing shadow profiles, (2) important times of day (relative to park use), (3) important seasons in the year, (4) location of the new shadow, (5) size and duration of new shadows, and (6) public good served by buildings casting a new shadow.

4.12.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

Wind and shadow are not analyzed under NEPA.

Significance Criteria under CEQA

The *San Francisco Planning Code* includes wind comfort and hazard criteria for wind impacts of buildings in certain districts, but these standards do not apply to the proposed project, because the site is not controlled by any of these Code sections.

However, the wind hazard and comfort criteria of *Planning Code* Section 148 are used in the environmental review of projects city-wide. Therefore, this analysis qualitatively evaluates the potential for the proposed project to create hazardous wind conditions and also addresses pedestrian comfort and sitting area comfort.

As discussed in Methodology, above, the Planning Commission and Recreation and Park Commission have adopted criteria for determining the significance of shadow impacts under Section 295. For this analysis, the proposed project and alternatives could have a potentially significant wind or shadow impact if it would:

- Alter wind in a manner that substantially affects public areas;
- Have an adverse effect on the use of any park or open space under the jurisdiction of the Recreation and Park Department; or
- Substantially affect the use of other existing publicly accessible open space or outdoor recreation facilities or other public areas.

Proposed Project

Impact WS-1: Wind Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The proposed project would not alter wind in a manner that substantially affects public areas. (Less than Significant)

As stated in the Regulatory Setting, above, the city's wind hazard and pedestrian comfort criteria do not apply to the project site. Therefore, this section presents a qualitative analysis of wind impacts.

As described in Section 3.12, existing wind speeds at the project site have not been quantified, but are expected to be strong enough to be considered windy. The San Francisco Public Utilities Commission (SFPUC) wind monitoring station at Visitacion Valley Middle School (450 Raymond Avenue), which is one-quarter mile northeast of the project site, indicates that average wind speeds were 6.4 m.p.h. in 2012. The project site's location on the eastern side of the McLaren Park hill means that it is not directly exposed to the higher speed winds that occur on the ridges and hilltops. Along with all of the urban development that exists upwind of the site, the park's topography and mature trees, and the existing two-story buildings on the project site, create surface roughness that further reduces wind speeds.

Buildout of the Sunnydale-Velasco HOPE-SF Master Plan would result in buildings both taller and closer together than those under existing conditions. These structures would increase the surface roughness at the project site compared to existing conditions, which would result in generally lower ground-wind speeds. The project buildings would include required fenestration, setbacks, and other massing components that would reduce winds redirected toward the ground level.

Within the interior of the project site, the taller and more-closely spaced buildings would reduce wind speeds between project buildings. The western and northern perimeters of the project site—along Gleneagles Golf Course and McLaren Park, would generally experience more substantial changes in wind speed, although existing mature vegetation in the park would continue to reduce winds, as under existing conditions. Although the new buildings could result in small localized increases in wind speeds, the change in wind speed is not anticipated to substantially affect use of any public area.

Wind impacts are generally caused by tall buildings that extend substantially above their surroundings, and by large buildings in open, windy sites. Based on a multitude of wind tunnel tests conducted for proposed buildings in San Francisco, buildings that are less than 80 feet tall typically do not result in substantial changes in ground-level winds. Because the proposed project buildings would not be substantially taller than nearby buildings and the tallest building would be no more than 60 feet above grade, the project would not alter wind in a manner that substantially affects public areas.

Accordingly, the proposed project would be expected to result in a *less-than-significant* wind impact.

Mitigation: None required.

Impact WS-2: Shadow Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The proposed project would not create new shadow in a manner that would affect the use of any park or open space under the jurisdiction of, or designated for acquisition by, the Recreation and Park Department, or other public area. (Less than Significant)

Section 295 of the *Planning Code* was adopted in response to Proposition K (passed November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the San Francisco Recreation and Park Department (SFRPD) by any structure exceeding 40 feet unless the Planning Commission finds the impact to be insignificant upon consultation with the Recreation and Park Commission.

The closest public open space to the project site that falls under the jurisdiction of SFRPD is John McLaren Park, located adjacent to the north and west sides of the project site. Herz Playground and Gleneagles International Golf Course are along the southern boundary of the park. To determine whether this project would conform to Section 295 of the *Planning Code*, a project-specific shadow analysis was prepared using a three-dimensional (3-D) model to determine if the proposed project would cast new shadow on these two park features. This model incorporates the new site layout, existing topography of the park, proposed topography of the project site, and massing of the proposed buildings.

To evaluate the year-round impact from the proposed project on these features, a quantitative analysis of sunlight and shade was conducted for net new shadow using the 3-D project model, consistent with the approach used by the Planning Department for Section 295 compliance, which is the standard approach to quantification of shadow impacts in San Francisco. The analysis consisted of calculating the amount of shadow coverage resulting from existing buildings at 15-minute intervals on one day per week, for six months of the year. The shadow coverage at the 15-minute intervals was averaged to calculate hourly shadow coverage (in shadow foot hours, or square foot hours of shadow; each shadow foot hour represents the equivalent of one square foot of shadow for a duration of one hour), and the hourly figures for each day were added and resulting numbers extrapolated to weekly figures through averaging with the preceding week's total. Because the sun's path from January through June essentially mirrors its path from July through December, the six months' shadow foot hour totals were doubled to return a yearly figure.² Given that the design of individual buildings is not finalized,

² This is the same methodology used by the Planning Department to calculate shadow and establish the Section 295 (Proposition K) baseline shadow coverage for other San Francisco parks.

larger building footprints were used for the shadow study than those shown in Figure 2-1.

Figure 4.12-1 shows the building footprints and heights used in the analysis. Buildings were analyzed to their anticipated rooflines, without rooftop mechanical spaces, which are typically exempt from *Planning Code* height calculations.

The shadow analysis prepared for the project includes images graphically representing the project-specific shadow analysis for the proposed project for every hour for June 21st and December 21st (the summer and winter solstices, respectively), and for September 21st, the fall equinox. (Conditions for March 21st, the spring equinox, are the same as those on September 21st and are therefore not separately shown.)³

McLaren Park would be considered a “larger park” under the 1989 criteria established for analysis of shadow impacts to parks. Given that the proposed project’s buildings in proximity to the park would be, at most, 50 feet in height, the project would not cast net new shadow that would exceed the additional 1.0% of shadow threshold for larger parks. Therefore, to better describe the project’s shadow effects on McLaren Park, this analysis is limited to the proposed project’s shadow effects on Herz Playground and Gleneagles Golf Course.

Table 4.12-1 shows the square footage, existing shadow load, net new shadow, and total shadow (post-project) of both the golf course and the playground. To assess the intensity of use when net new shadows would be present, the McLaren Park features were visited during the times of day and year when net new shadow would be present (afternoon / early evening during the late fall / early winter months).⁴

TABLE 4.12-1
NET NEW PROJECT SHADOW IN SQUARE FOOT HOURS

McLaren Park Feature	Size (square feet)	TAAS	Existing Shadow	Net New Project Shadow	Total Shadow
Gleneagles Golf Course	2,657,091	9,888,098,793	356,336	56,075,618	56,431,954
Herz Playground	265,203	986,925,625	44,985,889	9,948,753	54,934,642

SOURCE: CADP, 2014.

The project would not cast shadow on park elements farther to the north. The project’s shadow effects on portions of the park to the west of the project site are discussed qualitatively. These analyses are presented below. Observation of the use of these open spaces was made in the late afternoon hours on March 21, 2014.

³ ESA, Memorandum to San Francisco Planning Department, *Sunnydale-Velasco HOPE-SF Master Plan project -- Project-Specific CEQA and Sections 146, 147, and 295 Shadow Analysis*, October 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁴ Environmental Science Associates visited the golf course and playground on Friday, March 21, 2014, at approximately 4:00 p.m. The sky was clear.



SOURCE: ESA

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project
Figure 4.12-1
 Proposed Project Site Plan and Shadow Key Map

Gleneagles Golf Course

Gleneagles Golf Course is 2,657,091 square feet, and it has 9,888,098,793 square foot hours of TAAS, which is the amount of sunlight theoretically available on the open space, annually, during the hours subject to Section 295, if there were no shadows from existing or proposed buildings, structures, or vegetation. Under existing conditions, the golf course is sunny throughout the day throughout the year, with only minimal shade from structures or topography⁵ present in the early morning hours, within the first 15 minutes after one hour after sunrise (the first Section 295 minute) from about mid-March to early September. Starting in mid-September, shade is present in the final 15 minutes before one hour before sunset (the last Section 295 minute), and shade in the morning is no longer present. The afternoon and early evening shade increases in duration and extent approaching the winter solstice, when it reaches maximum extent at 10,151 square feet at one hour before sunset. The existing shadow on the golf course comprises 356,336 square foot hours annually, or 0.0036 percent (36 ten-thousandths of 1 percent) of TAAS.

The proposed project's 40- and 50-foot buildings along the northern boundary of the project site would add 56,075,618 square foot hours of shadow to Gleneagles Golf Course, which would be a 0.5671 percent increase in shadow as a percentage of TAAS, to 0.5707 percent (slightly more than one-half of 1 percent). This limited new shadow would fall on the open space every day of the year. In the late spring and early summer months, it would be an incremental increase, from about 2:45 p.m. onward throughout the afternoon and evening. Net new shadow would increase in extent and duration in the fall and spring months. At the spring and fall equinoxes, new shadow would fall on a portion of the golf course from about 10:45 a.m. onward throughout the day, with the greatest geographic extent at one hour before sunset. Shadow would continue to increase in duration and extent into the late fall and early winter months. From November through early February, the project would cast some new shadow on a portion of the golf course for the entire day, and it would increase in geographic extent from one hour after sunrise to one hour before sunset.

The "worst-case day," with the maximum net new shadow in terms of shadow-foot-hours, would occur on the winter solstice, December 21st. The proposed project would cast new shadow on a portion of the golf course for the entire day, and new shadow extent would increase throughout the day. The new shadow load on the golf course would be 358,761 square foot hours, and the net new shadow area at its maximum would be 161,496 square feet at one hour before sunset, as opposed to 10,151 square feet under existing conditions at this date and time. Representative shadow from the worst-case day is shown in **Figures 4.12-2 through 4.12-4**.

Net new shadow would be cast onto the areas at the southern boundary of the golf course, which abuts the project site and is populated by mature trees that cast abundant shade under existing conditions.⁶ During all times of year, most of the net new shadow cast by the project buildings would be subsumed within this existing shade, although some park features would be newly

⁵ Vegetation, including mature trees, is not considered in the shadow analysis because it changes over time naturally.

⁶ As noted, shade from trees is not considered in the quantification of shadow effects.



SOURCE: CADP

NOTE: This represents the worst-case day with the maximum net new shadow in terms of shadow-foot-hours.

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

Figure 4.12-2
December 20th (Winter Solstice) –
Sunrise plus 1 hour (8:19 a.m.)



2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

SOURCE: CADP

NOTE: This represents the worst-case day with the maximum net new shadow in terms of shadow-foot-hours.

Figure 4.12-3
December 20th (Winter Solstice) – Noon



SOURCE: CADP

2010.0305E: Sunnydale-Velasco HOPE SF Master Plan Project

NOTE: This represents the worst-case day with the maximum net new shadow in terms of shadow-foot-hours.

Figure 4.12-4
December 20th (Winter Solstice) –
Sunset minus 1 hour (3:54 p.m.)

shaded. Only in the late afternoon and evening hours during the late fall and early winter months would net new shadow extend into the fairways, rough, or other areas of play. Based on observation of the golf course, the open space is regularly used at this time of day. (As noted, shade from trees is not considered in the quantification of shadow effects.)⁷ It can be assumed that the open space would be as-heavily, or more heavily, used during weekends.

Herz Playground

Herz Playground is 265,203 square feet and it has 986,925,625 square foot hours of TAAS. Under existing conditions, the playground is primarily sunny throughout the day throughout the year. It is partially shaded by the Coffman Pool house and the restroom building, particularly in the morning hours until about 11:00 a.m. all year, when this shadow is cast southwestward and then westward as the morning progresses. This shadow decreases in extent throughout the day, and in the afternoon and evening this shadow is cast eastward, toward Hahn Street and Visitacion Avenue. Existing shadow is at its maximum extent at 54,892 square feet on June 14th / June 28th at one hour after sunrise. The existing shadow on the playground comprises 44,985,889 square foot hours annually, or 4.56 percent of TAAS.⁸

The proposed project would add 9,948,753 square foot hours of shadow to the playground, which would be a 1.07 percent increase in shadow as a percentage of TAAS, to 5.63 percent. New shadow would fall on the open space for most of the year, from late July until late May. In the late spring and early summer months, it would be an incremental increase, starting in the late afternoon hours, and accounting for less than 1,000 square feet of net new square foot hours daily. Shadow duration would increase in the late summer and mid-spring months. Also, the geographic extent would increase as the day progresses. At the spring and fall equinoxes, net new shadow would be cast from about 11:30 a.m. onward through the end of the day, totaling about 20,000 square foot hours daily. Shadow would continue to increase in geographic extent and duration into the fall and mid-winter months and spring and mid-fall, when some net new shadow would be cast all day onto the playground, totaling about 47,000 square foot hours daily.

On the winter solstice, net new shadow would be cast all day onto the playground. This would be the “worst-case day,” with the maximum net new shadow in terms of shadow-foot-hours. The new shadow load on the playground would be 72,536 square foot hours, and the net new shadow area at its maximum would be 40,368 square feet at one hour before sunset. Representative shadow from the worst-case day is shown in Figures 4.12-2 through 4.12-4.

Net new shadow would be cast onto the areas at the southern boundary of the playground, which abuts the project site.⁹ This area includes a newly resurfaced basketball court (formerly a tennis court) and is populated by mature trees that cast abundant shade under existing conditions. During

⁷ Jonathan Carey of Environmental Science Associates visited the golf course and playground on Friday, March 21, 2014, at approximately 4:00 p.m. The sky was clear.

⁸ Shadow from park structures themselves is discussed here; however, such shadow is exempt from Section 295 controls.

⁹ As noted, shade from trees is not considered in the quantification of shadow effects.

all times of year, most of the net new shadow cast by the project buildings would be subsumed within this existing shade, although some park features would be newly shaded.

Based on observations of the playground at approximately 4:30 p.m., the open space is generally moderately used in the late afternoon hours, when the project would cast new shadow.¹⁰ The heaviest observed use at this hour was at the basketball court near the southwestern edge of the playground, adjacent to the project site, where approximately 10 children and teenagers played informally. The additional shadow would be of a limited duration (approximately 1 hour in the late fall and early winter months), which would not substantially affect the use of the basketball court, an active recreational facility where the additional shade would not preclude play or make it uncomfortable. Moreover, an additional basketball court is located in the northern portion of the playground, along Visitacion Avenue, and this court would be unaffected by the 1 hour of additional shade in the late fall and early winter months. The use of Herz Playground would not be substantially affected by the 1 hour of additional shade

Other Locations

This section discusses effects on open spaces not subject to *Planning Code* Section 295.

The proposed project buildings would cast shadow on the surrounding neighborhood, as well as upon the project site itself.

In the late fall and early winter months, the new buildings at the west end of the project site would cast shadow onto some of the outdoor areas of San Francisco Unified School District's John McLaren Early Education Center in the morning hours, until about 11:00 a.m., and from about 3:00 p.m. onward, the new buildings would cast shadow eastward, onto and across Hahn Street, shading sidewalks and nearby residences.

During the late winter / early spring months, as well as the late summer / early fall months, some net new shadow would be cast on the John McLaren Early Education Center in the morning hours, until about 10:00 a.m., although it would be of less geographic extent than during the late fall and early winter months. Beginning around 4:00 p.m., net new shadow would be cast onto the Hahn Street sidewalks.

The limited duration of this net new shadow onto the school and public sidewalks, would not be expected to substantially affect their use. The net new shadow would be of limited duration and extent, primarily confined to either the morning or evening hours.

The proposed project would also cast net new shadow on the areas within the existing Sunnydale and Velasco housing developments that compose the project site. The project would entail demolition of all on-site structures and open spaces, grading, and realignment of streets. Therefore, although net new shadow would be present, it would not be cast upon any existing

¹⁰ Jonathan Carey of Environmental Science Associates visited the golf course and playground on Friday, March 21, 2014, at approximately 4:00 p.m. The sky was clear.

recreational resources or outdoor open spaces on the project site. Generally, the new shadow would be more typical of that found in other neighborhoods of San Francisco, and urban areas overall, with 3- and 4-story buildings. Shadows would be more prevalent during late fall and early winter months, and less prevalent in the late spring and early summer months. The new open spaces that would be built as part of the project—including the Mid-Terrace Park along Center Street and the Neighborhood Green at the intersection of Sunnydale Avenue and Santos Street—would be primarily unshaded during the day, although they would be shaded during the morning and late afternoon / evening hours. The project would not be considered to decrease the TAAS of these facilities because they would be constructed in tandem with the surrounding development.

Summary

New shadow during all four seasons would be of limited duration and primarily fall on wooded areas of Herz Playground and Gleneagles Golf Course. The existing active recreational uses would not be shaded by the project for most of the year. The net new shadow would not be expected to adversely affect these elements because it would be of limited duration. Shadow would not preclude use of these recreational elements.

Shadow would also be cast within the project site. Given the project site's existing low-density development—as well as the residential buildings' locations and orientations away from streets and sidewalks—the existing Sunnydale and Velasco buildings do not cast substantial shadow on public rights of way. The increased height, bulk, and overall development density of the proposed project as compared to existing conditions would increase overall shadow. This new shadow would be most noticeable in the late fall and early winter, as well as early morning and late afternoon year round, when the sun is lowest in the sky. It would be of an extent and duration typical of shadow in other moderate-density built-out urban neighborhoods.

Project-generated shadow would not substantially affect the use of outdoor recreation facilities adjacent to the project site. Project-generated shadow would be typical of moderate-density San Francisco neighborhoods outside of a downtown skyscraper core.

The impact would be *less than significant* under CEQA because the proposed project would create new shadow in a manner that would not substantially affect outdoor recreation facilities or other public areas.

Mitigation: None required.

Proposed Project Variant

The project variant would result in the same site plan and building envelope as the proposed project. Wind and shadow effects from the project variant would be the same as that from the project. Impacts would be *less than significant* under CEQA.

Alternative A: Reduced Development / Density Alternative

Impact A-WS-1: Wind Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The Reduced Development / Density Alternative would not alter wind in a manner that substantially affects public areas. (Less than Significant)

Wind impacts are generally caused by tall buildings that extend substantially above their surroundings, and by large buildings in open, windy sites. The Reduced Development / Density Alternative would be located within the same boundary as the proposed project, as well as include the same street layout. The alternative would include 328 fewer units than the proposed project. This reduction in units and associated square footage would result in a corresponding reduced built envelope as compared to the proposed project. However, as stated in the Project Description, the height of the new buildings under the alternative would range from 40 to 60 feet above ground level.

For the same reasons that the proposed project would not result in substantial ground-level winds, Alternative A would not result in substantial ground-level winds. The alternative would not include buildings substantially taller than nearby buildings and the tallest building would be no more than 60 feet above grade. The new structures would increase the surface roughness at the project site compared to existing conditions, which would result in generally lower ground-wind speeds. New structures would not be substantially taller than nearby buildings such that wind impacts would result.

The wind impact would be *less than significant* under CEQA because The Reduced Development / Density Alternative would not alter wind in a manner that substantially affects public areas.

Mitigation: None required.

Impact A-WS-2: Shadow Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The Reduced Development / Density Alternative would not create new shadow in a manner that would affect the use of any park or open space under the jurisdiction of, or designated for acquisition by, the Recreation and Park Department, or other public area. (Less than Significant)

The Reduced Development / Density Alternative would be located within the same boundary as the proposed project, as well as include the same street layout. The alternative would include 328 fewer units than the proposed project. This reduction in units and associated square footage would result in a corresponding reduced built envelope as compared to the proposed project. This reduced built envelope would cast less overall shadow than the proposed project. The

shadows cast by the alternative would be slightly less extensive than those cast by the proposed project, and therefore less than those shown in Figures 4.12-2 through 4.12-4. The alternative would result in fewer net new square-foot hours of shadow than the proposed project. For the same reasons discussed in Impact WS-2, the net new shadow would not substantially affect outdoor recreation facilities or other public areas.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would create new shadow in a manner that would not substantially affect outdoor recreation facilities or other public areas.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-WS-1: Wind Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The One-for-One Replacement Alternative would not alter wind in a manner that substantially affects public areas. (No Impact)

The One-for-One Replacement Alternative would result in the same site plan, building massings, and building heights as under existing conditions. Given that the buildings would be located in the same location and that they would maintain their current configuration, they would not noticeably change ground-level wind patterns.

There would be *no impact* under CEQA because the alternative would not alter wind in a manner that substantially affects public areas.

Mitigation: None required.

Impact B-WS-2: Shadow Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The One-for-One Replacement Alternative would not create new shadow in a manner that would affect the use of any park or open space under the jurisdiction of, or designated for acquisition by, the Recreation and Park Department, or other public area. (No Impact)

Given that the One-for-One Replacement Alternative would result in the same building locations, heights, and massings as under existing conditions, no net new shadow would be cast as a result of the alternative.

There would be *no impact* under CEQA because the alternative would create new shadow in a manner that would not substantially affect outdoor recreation facilities or other public area.

Mitigation: None required.

Alternative C: No Action Alternative

The No Action Alternative would not change the site plan, building heights, or building massings on the project site. The existing Sunnydale and Velasco buildings would remain in their current configurations. There would be no change to wind or shadow conditions on the site, and there would be *no impacts* under CEQA.

4.12.3 Cumulative Impacts

Impact CC-WS: Cumulative Wind and Shadow Effects

NEPA: This topic is not analyzed under NEPA.

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse wind and shadow impacts. (Less than Significant)

Proposed Project, Variant, and Alternative A

Given that wind and shadow effects are highly location-dependent, the geographic context for cumulative wind and shadow effects encompasses the immediate project site vicinity—a few blocks (less than one-quarter of a mile) in each direction. It is in this vicinity that cumulative development, when combined with the proposed project or its alternatives, could have any effect on wind and shadow on the same locations.

Regarding cumulative wind impacts, as indicated under Impacts WS-1, above, the proposed project and its alternatives would result in buildings that would not be substantially taller than nearby buildings, and less than 80 feet tall. There are no reasonably foreseeable future developments in the cumulative geographic context that would be that tall either. The project's, variant's, and Alternative A's new buildings would be of an orientation and density that would reduce wind between buildings and increase wind speeds along the northern and western project boundaries. The cumulative impact would be *less than significant* under CEQA because the proposed project, variant, or alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse wind impacts.

Regarding cumulative shadow impacts, the proposed project, variant, and Alternative A would result in net new shadow on the southern edge of McLaren Park, including Herz Playground and Gleneagles Golf Course. The only reasonably foreseeable future project in proximity to these facilities is the proposed bike skills park on the north side of Sunnydale Avenue, east of the project site. The bike skills park project, however, would not include large new structures or

buildings that could cast shadow on the golf course, and the proposed project, variant, and Alternative A would not cast shadow on the bike skills park.

There are no other reasonably foreseeable future developments in the project site vicinity that would result in substantial new shadow on these recreational features at other times of day. Although the project and cumulative development would result in increased shading on public sidewalks, this shading would be typical for built-out urban areas away from the downtown skyscraper core. Cumulative shadow effects would be *less than significant* under CEQA because no other past, present, or reasonably foreseeable future projects would cast shadows on parks.

Alternative B

Alternative B's buildings would result in wind and shadow conditions almost identical to existing conditions. There would be *no cumulative impact*.

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4.13 Recreation

4.13.1 Regulatory Framework

State and Local

The Quimby Act was established by the California Legislature in 1965 to preserve open space and parkland. The Quimby Act allows cities and counties to establish requirements for new development to dedicate land for parks, pay an in-lieu fee, or perform a combination of the two. The City of San Francisco has not established a citywide target ratio of parkland to residents nor has it adopted a Quimby Act ordinance requiring land dedication or in-lieu fees.

Open Space Standards

A measure used to determine adequate provision of parkland is the “maximum distance” method, by which a municipality sets a goal that no resident should live farther than a specified distance from a park. This method is not widely used in large cities. In a 2004 survey of the 50 largest cities in the country, the Trust for Public Land found that only 18 of the cities used this type of standard, with distances ranging from 0.125 miles to 1 mile. According to the American Planning Association, numerous studies show that Americans are rarely willing to walk more than a block or two to a park, especially considering neighborhood and geographic boundaries that may restrict such movement.¹

The San Francisco Sustainability Plan has an objective of providing one park or open space within a 10-minute walk of every home (people walk an average of 0.5 miles in 10 minutes).² The maximum distance method is not appropriately applied to all recreational facilities. For example, softball and baseball diamonds tend to serve several neighborhoods. The San Francisco Department of Public Health, in its San Francisco Indicator Project, shows what portion of the population lives within one-quarter mile of a public recreation facility. As shown by the Indicator Project, most of the project site, with the exception of the southwestern portion, is within one-quarter mile of such a facility.³

The *San Francisco General Plan* Recreation and Open Space Element (ROSE) identifies the project site and surrounding Visitacion Valley neighborhood as having moderate need for park acquisition and renovation.

¹ American Planning Association, “How Far Is Too Far?” *Planning Magazine*, available online: http://cloud.tpl.org/pubs/ccpe_Planning_mag_article12_2004.pdf, accessed March 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Fairfax County, Virginia, *Walking Distance Research: Abstracts*. http://www.fairfaxcounty.gov/planning/tod_docs/walking_distance_abstracts.pdf, accessed March 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ SFDPH, San Francisco Indicator Project, Proportion of Population that is within ¼ mile a Public Recreation Facility, available online: <http://www.sfindicatorproject.org/img/indicators/pdf/RecCenters.pdf>, 2008.

Planning Code Requirements

San Francisco Planning Code Section 135, Usable Open Space for Dwelling Units and Group Housing, R, NC, Mixed Use, C, and M Districts, states that 100 square feet of private open space must be provided for every dwelling unit in an RM-1 zoning district (the zoning use district that currently applies to the project site). Alternatively, for shared open spaces, 133 square feet of open space should be provided for every dwelling unit.

4.13.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For recreation the analysis considers whether the proposed project would:

- Exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.

Significance Criteria under CEQA

The proposed project and alternatives would have a significant adverse recreation impact if it would:

- 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;
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment; or
- Physically degrade existing recreational resources.

Proposed Project

Impact RE-1: Effects Due to Increased Use

NEPA: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation. (Less than Significant)

CEQA: The proposed project would increase the use of existing neighborhood and regional parks or other recreational facilities, but not such that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant)

Project construction activities would be contained within the project site. Construction would proceed in phases and require temporary closure of streets within the project site, necessitating detours on other nearby roadways. (The construction-related transportation impacts of the project are discussed in Section 4.8.) Notifications of street closures and detour directions will be provided in advance to all affected residents and users, including teachers and parents of McLaren Elementary School. Notifications would also be posted at primary entrances to

McLaren Park that could be affected by the detours. Although access to specific park entrances could be impeded, access to the park would continue through construction at numerous locations.

The project would provide approximately 5.6 acres of new parks, one acre of linear open space, and 5 acres of courtyards/common open space for a total of 11.5 acres of usable open space. These 11.5 acres, or 500,940 square feet, would result in more than 294 square feet of open space for each of the 1,700 units of the proposed development. The project would exceed the requirements of *Planning Code Section 135, Usable Open Space for Dwelling Units and Group Housing, R, NC, Mixed Use, C, and M Districts*. Some features that would be implemented in the new open space areas include rainwater harvesting, rain gardens, and permeable paving. The open space at the northeastern portion of the project site could connect directly to Herz Playground.

The indoor recreational areas would be relocated during construction. Some of these services would continue under the new development pending further discussion between the project sponsor and SFRPD.

The proposed project's residents would have convenient access to these new open spaces, as well as other existing open spaces like John McLaren Park, Herz Playground, and Crocker Amazon Playground (see Section 3.13). As discussed in Section 4.05, the proposed project would conservatively increase site population by up to 1,986 persons, although the population increase would likely be much lower due to the proposed unit mix. The increased park use associated with this population would be dispersed among McLaren Park and other existing neighborhood recreational facilities, the 5.6 acres of public space of the proposed project, and the additional almost 6 acres of private and public open space included in the projects. The increased population from the proposed project would not substantially deteriorate existing recreational facilities.

Therefore, effects would be *less than significant* under NEPA because the proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.

Impacts under CEQA would be *less than significant* because the proposed project would increase the use of existing neighborhood and regional parks or other recreational facilities outside of the project site temporarily during construction, or during operation, but not such that substantial physical deterioration of the facilities would occur or be accelerated.

Mitigation: None required.

Impact RE-2: Effects Due to Construction

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would include the construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment. (Less than Significant with Mitigation)

The proposed project includes construction of a new community center that would provide approximately 40,000 square feet of interior community center/recreational space for use by project residents and residents of the neighborhood. In addition, some of the 11.5 acres of public open space would require grading, landscaping, and construction of recreational features—such as playground or public plazas.

Environmental effects from construction of these facilities are addressed in the applicable sections throughout this EIR/EIS, and impacts would be mitigated to a less-than-significant level by implementation of the measures identified in those sections.

Moreover, construction of these recreational facilities is intended to improve site aesthetics, accommodate some of the recreational demand generated by increased residential density on-site, and manage stormwater runoff.

The impact would be *less than significant with mitigation* under CEQA because the proposed project would include the construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact RE-3: Physical Degradation Effects

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not physically degrade existing recreational resources. (Less than Significant)

The proposed project would demolish all existing recreational facilities on the project site owned by the San Francisco Housing Authority and replace them with new open spaces and passive recreational areas as well as a new community center that provides recreational space. The proposed new facilities and open space areas will be accessible to the general public. The

courtyards and common areas within each of the buildings would be intended for the use of the residents only. The proposed project would provide 11.5 acres of usable parks and open spaces, a greater amount than the 0.5 acre of open space/playground that is currently at the project site and owned by the San Francisco Housing Authority (although the site does contain additional space in yards between project buildings not officially designated or programmed as open space). As stated under Impact RE-1, this amount would also exceed the requirements of the *San Francisco Planning Code* under the current zoning provisions for the project site.

While the new facilities would not be owned by the San Francisco Recreation and Parks Department, the project sponsor would collaborate with the department to plan the new recreational areas and to maintain the City's safety standards. The project would not physically degrade McLaren Park or other nearby parks. The proposed project would improve on the currently existing facilities by replacing some of them with new and expanded ones.

The impact would be a *less than significant* under CEQA because the proposed project would not physically degrade existing recreational resources.

Mitigation: None required.

Proposed Project Variant

The project variant would result in the same site plan and new recreational facilities as would the proposed project. The variant, however, would result in fewer residential units and a commensurate reduction in on-site population. Effects on recreational resources would be comparable to those under the proposed project, and impacts would be *less than significant* under CEQA and *less than significant* under NEPA.

Alternative A: Reduced Development / Density Alternative

Impact A-RE-1: Effects Due to Increased Use

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would increase the use of existing neighborhood and regional parks or other recreational facilities, but not such that substantial physical deterioration of the facilities would occur or be accelerated. (Less than Significant)

The Reduced Development / Density Alternative would result in the same site plan and building layout as the proposed project, but fewer total units. While the proposed project would result in the construction of up to 1,700 units, the Reduced Development / Density Alternative would result in construction of up to 1,372 units. The alternative would include construction of the same 11.5 acres of open space as the proposed project. These 500,950 square feet of open space would

result in more than 365 square feet of open space for each of the 1,372 units, thereby exceeding *Planning Code* requirements.

This relatively lesser increase in population would not substantially degrade existing recreational facilities.

Therefore, effects would be *less than significant* under NEPA because the alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.

Impacts under CEQA would be *less than significant* because the alternative would increase the use of existing neighborhood and regional parks or other recreational facilities outside of the project site temporarily during construction, as well as during operations, but not such that substantial physical deterioration of the facilities would occur or be accelerated.

Mitigation: None required.

Impact A-RE-2: Effects Due to Construction

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would include construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment. (Less than Significant with Mitigation)

The alternative would include the construction of the same recreational facilities and community center as the proposed project. Environmental effects from construction of these facilities are addressed in the applicable sections throughout this EIR/EIS, and impacts would be mitigated to a less-than-significant level by implementation of the measures identified in those sections.

The impact would be *less than significant with mitigation* under CEQA because the alternative would include the construction of indoor and outdoor recreational facilities, the construction of which could have adverse physical effects on the environment, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact A-RE-3: Physical Degradation Effects

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not physically degrade existing recreational resources. (Less than Significant)

As stated under Impact A-RE-1, the Reduced Development / Density Alternative would place less demand on existing recreational resources than would the proposed project for two reasons. First, the alternative would result in a higher ratio of new common and public open space to unit than would the proposed project. It also would result in more programmed, designed public open space than currently exists at the development. Second, the alternative would result in fewer total residents, thereby resulting in a lower demand for existing recreational facilities as compared to the proposed project. For the same reasons as discussed for the proposed project, the alternative would not place an undue burden on existing facilities. The alternative would improve on the currently existing facilities by replacing some of them with new and expanded ones.

The impact would be a *less than significant* under CEQA because the alternative would not physically degrade existing recreational resources.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-RE-1: Effects Due to Increased Use

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation. (Less than Significant)

CEQA: The One-for-One Replacement Alternative 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. (Less than Significant)

The One-for-One Replacement Alternative would entail demolition and reconstruction of the existing buildings on the project site. Buildings would be reconstructed in their current locations, and there would be no increase in the total number of residential units on the site. Construction could involve temporary closure of portions of the site to public access, thereby diverting recreational users to other public open spaces and facilities. This shift in demand would be temporary and would not accelerate substantial physical deterioration of existing recreational facilities.

Upon completion of construction, the alternative would result in approximately the same number of on-site residents as under existing conditions. These residents would not increase the demand for public parks and open spaces beyond the current demand.

The alternative would result in a *less-than-significant* impact to existing recreational facilities under NEPA because it would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.

Impacts under CEQA would be *less than significant* because the alternative would increase the use of existing neighborhood and regional parks or other recreational facilities outside of the project site temporarily during construction, but not such that substantial physical deterioration of the facilities would occur or be accelerated.

Mitigation: None required.

Impact B-RE-2: Effects Due to Construction

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would include recreational facilities or require the construction or expansion of recreational facilities, the construction of which would have less-than-significant adverse physical effects on the environment. (Less than Significant)

The alternative would entail demolition and reconstruction of the buildings on the project site, including the five defined recreational areas within the project site. The impact associated with replacement of these facilities would be *less-than-significant* under CEQA because they would involve installation of relatively minor structures and paving. Environmental effects from construction of these facilities are addressed in the applicable sections throughout this EIR/EIS.

Mitigation: None required.

Impact B-RE-3: Physical Degradation Effects

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not physically degrade existing recreational resources. (Less than Significant)

As stated under impact B-RE-1, above, the alternative would not result in an increase in on-site population or demand for recreational resources. Existing outdoor recreational resources at the project site would be replaced, and indoor recreational resources would be reconstructed in their same location with similar building floor plans.

The impact would be a *less than significant* under CEQA because the alternative would not physically degrade existing recreational resources, but instead replace them with new ones.

Mitigation: None available.

Alternative C: No Action Alternative

The No Action Alternative would not involve the construction of new recreational facilities or the expansion of existing facilities. The site's total population would not change as a result of this alternative. The demand on existing recreational resources would remain as it is under existing conditions, and there would be *no impacts* to recreational resources under both NEPA and CEQA.

4.13.3 Cumulative Impacts

Impact CC-RE: Cumulative Impacts to Recreation

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse recreation impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse recreation impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The cumulative recreational resources analysis includes existing and proposed parks and open spaces in the project site vicinity that would be used by residents of the proposed project or nearby past, present, and reasonably foreseeable future projects.

The 700-acre Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project is located about two miles to the east of the project site, the Visitacion Valley/Schlage Lock Special Use District (SUD) is approximately 1 mile to the east of the project site, and the Executive Park Sub Area Plan SUD is planned for the approximately 70-acre area between Candlestick Point and Highway 101. These plans envision a mix of residential and commercial uses that, in combination with the proposed project and its alternatives, would increase the use of existing and proposed recreational resources. Most of the developments, however, include new recreational facilities that would absorb some of the increased demand, as well as a portion of existing demand on existing recreational resources. Development of these new recreational facilities would not result in significant adverse physical effects not already disclosed in their respective environmental documents. In addition, the increased usage of existing parks would not result in substantial deterioration or degradation.

In addition to these development plans, the proposed off-road “bicycle skills” park could be located immediately west of the Sunnydale-Velasco project site, in McLaren Park. The bike skills park would contain bike trails, jumps, berms, and mounds, as well as a downhill course and other features. The bike park use would be an active use that would attract more recreational users to this location of McLaren Park, which sees relatively fewer visitors than the programmed playground locations on the park’s northern side. Active recreational use of the bike park site, in combination with the proposed project, would not result in substantial physical degradation of existing recreational resources.

Cumulative impacts to recreational resources would be *less than significant* under NEPA because the proposed project, variant, or alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for parks and recreation.

Cumulative impacts to recreational resources would be *less than significant* under CEQA because the proposed project, variant, or alternatives, in combination with other past, present, and reasonably foreseeable future projects, 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, include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment, or not physically degrade existing recreational resources.

4.14 Utilities and Service Systems

4.14.1 Regulatory Framework

Federal

Clean Water Act

In 1972, the Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the U.S. Environmental Protection Agency (U.S. EPA) the authority to implement pollution control programs. The CWA sets water quality standards for contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, to finance municipal wastewater treatment facilities, and to manage polluted runoff. The U.S. EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and programs in California to the State Water Resources Control Board (SWRCB) and the nine RWQCBs. Water quality standards applicable to the project are listed in the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), discussed further below under State Regulations.

State

Urban Water Management Plan Act and SB 610

In 1983, the California Legislature enacted the Urban Water Management Planning Act (*California Water Code* Sections 10610 through 10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of the Urban Water Management Plan as well as how urban water suppliers should adopt and implement the plans. The plan must be updated at least every 5 years on or before December 31 in years ending in five and zero.

California, through the passage of Senate Bill 610, requires that a jurisdiction prepare a water supply assessment for development projects that meet certain criteria, including a project that creates demand for 500 or more housing units. The San Francisco Public Utilities Commission (SFPUC) prepared a Water Supply Assessment for the Sunnydale-Velasco HOPE SF Master Plan project, as described under Impact UT-4, below.

San Francisco Bay Water Quality Control Plan (Basin Plan)

San Francisco Bay waters are under the jurisdiction of the San Francisco Bay RWQCB which established regulatory standards and objectives for water quality in the bay in the *Water Quality Control Plan for the San Francisco Bay Basin*, commonly referred to as the Basin Plan.¹ The Basin Plan

¹ San Francisco Bay Regional Water Quality Control Board (RWQCB), *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), www.swrcb.ca.gov/rwqcb2/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf, December 31, 2010. Accessed March 17, 2014.

identifies existing and potential beneficial uses for surface waters and provides numerical and narrative water quality objectives designed to protect those uses. The preparation and adoption of water quality control plans is required by the *California Water Code* (Section 13240) and supported by the federal CWA. Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control. Adoption or revision of surface water standards is subject to the approval of the U.S. EPA.

Southeast Plant, North Point, and Bayside Facilities NPDES Permit

The City currently holds an NPDES permit (RWQCB Order No.R2-2013-0029) adopted by the RWQCB in August 2013, that covers the SEWPCP, the North Point Wet Weather Facility, and all of the bayside wet-weather facilities, including CSDs to the Bay.² The permit specifies discharge prohibitions, dry-weather effluent limitations, wet-weather effluent performance criteria, receiving water limitations, sludge management practices, and monitoring and reporting requirements. The permit prohibits overflows from the combined sewer discharge structures during dry weather, and requires wet-weather overflows to comply with the nine minimum controls specified in the federal Combined Sewer Overflow Control Policy, described above, and the City's Long Term Control Plan. Areas that drain to the City's combined sewer system are subject to this permit.

Assembly Bill 939 and SB 1016

The California Integrated Waste Management Act of 1989, or Assembly Bill 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of all solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures to assist in reducing these impacts to less-than-significant levels. With the passage of Senate Bill 1016 (the Per Capita Disposal Measurement System) in 2006, only per capita disposal rates are measured to determine if a jurisdiction's efforts are meeting the intent of Assembly Bill 939.

Local

Residential Water Conservation Ordinance

The Residential Conservation Ordinance, amended through 2009, encourages conservation of existing water supplies by reducing the overall demand for water in residential buildings by requiring the installation of water conservation devices in all residential buildings, except for tourist hotels and motels, upon the occurrence of specific events such as when the building undergoes major improvements, when there is a meter conversion, when there is a condominium conversion, and when there is a transfer of title. A valid water conservation inspection is required

² Regional Water Quality Control Board, San Francisco Bay Region, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037664, Order No.2008-0007, for City and County of San Francisco Southeast Water Pollution Control Plant, North Point Wet Weather Facility, and Bayside Wet Weather Facilities and Wastewater Collection System., adopted January 31, 2008.

to be completed by a qualified inspector, and a certificate of compliance must be submitted to DBI and recorded with the San Francisco Recorder's Office.

Commercial Water Conservation Ordinance

The Commercial Conservation Ordinance, amendments effective as of July 1, 2009, requires water conservation by improving the water efficiency of commercial buildings by changing the standards for water closets, urinals, showerheads and faucet aerators and requiring leak repair, required upon the occurrence of major additions or improvements, and in all defined commercial buildings. An inspection verifying completed water conservation measures is a pre-condition for issuance of a Certificate of Final Completion and Occupancy by DBI.

Landscape Irrigation

The project would be required to comply with San Francisco's Water Efficient Irrigation Ordinance, adopted as Chapter 63 of the *San Francisco Administrative Code* and the SFPUC Rules & Regulations Regarding Water Service to Customers. The project's landscape and irrigation plans shall be reviewed and approved by the SFPUC prior to installation.

Non-Potable Water Use for Soil Compaction and Dust Control

This project is required to comply with San Francisco's Restriction of Use of Potable Water for Soil Compaction and Dust Control Activities, adopted as Article 21 of the *San Francisco Public Works Code*. Non-potable water must be used for soil compaction and dust control activities during project construction or demolition. The SFPUC operates a recycled water truck-fill station at the Southeast Water Pollution Control Plant that provides recycled water for these activities at no charge.

San Francisco Stormwater Design Guidelines

The SFPUC and the Port of San Francisco have developed the *San Francisco Stormwater Design Guidelines*, for areas with separated sanitary and storm sewers, as described in Section 5.16.2, Hydrology and Water Quality, Regulatory Framework.³ The guidelines set forth a planning process for stormwater management with Low-Impact Design criteria.

San Francisco Zero Waste Policy

In September 2002, the San Francisco Board of Supervisors adopted Ordinance 679-02, which states in part:

RESOLVED, That the Board of Supervisors adopts a goal for San Francisco of 75% landfill diversion by the year 2010, and authorizes the San Francisco Commission on the Environment to adopt a long term goal of zero waste, with the date set once when the 50%

³ SFPUC, *Stormwater Design Guidelines*, available online at http://sfwater.org/mto_main.cfm/MC_ID/14/MSD_ID/361/MTO_ID/543, accessed May 22, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

diversion goal is met, and will establish including a timeline to achieve a goal of zero waste once the 50% diversion goal is met.

In 2003, it was determined that the goal of 50-percent landfill diversion had been met in 2001. Accordingly, the San Francisco Commission on the Environment passed Resolution 002-03-COE, which states in part:

RESOLVED, That the Commission on the Environment adopts a date for achieving zero waste to landfill by 2020 and directs the Department of the Environment to develop policies and programs to achieve zero waste, including increasing producer and consumer responsibility, in order that all discarded materials be diverted from landfill through recycling, composting or other means.

Moreover, the goal of 75-percent landfill diversion by 2010 was met in 2008 through the implementation of numerous programs and efforts.

San Francisco Construction and Demolition Waste Ordinance

In 2006, the City adopted Ordinance No. 27-06⁴ mandating the recycling of construction and demolition debris. This ordinance affects all construction projects such as new construction, remodels, and partial demolitions, and requires the building permit holder or the property owner to ensure that all construction and demolition materials removed from the project are properly recycled. This ordinance prohibits any construction and demolition materials from being placed in trash or sent to a landfill.

Construction and demolition materials source-separated at the construction site for reuse or recycling must be taken to a facility that reuses or recycles those materials. The ordinance requires that all mixed construction and demolition debris be transported offsite by a registered transporter and taken to a registered facility that can process mixed construction and demolition debris and divert a minimum of 65 percent of the material from landfills. *San Francisco Building Code* Chapter 13C, from the green building requirements established in 2008, increased the minimum diversion rate to 75 percent.

Full demolition of an existing structure requires that a Demolition Debris Recovery Plan be submitted to and approved by the Department of the Environment before a Full Demolition Permit (Form 6) will be issued by the Department of Building Inspection. The plan must demonstrate how a minimum of 65 percent of the material from the demolition will be diverted from landfills.

San Francisco Green Building Ordinance: Space Requirements

The lack of space for separate collection of recyclables has long been recognized as a problem that inhibits waste reduction. This is especially true in cities such as San Francisco that have

⁴ City and County of San Francisco, Ordinance No. 27-06, available online at <http://www.sfenvironment.org/downloads/library/ondemolitionordinancefinal.pdf>, accessed May 2, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

numerous older structures. Accordingly, in 2008 the City enacted Green Building Requirements⁵ that include the following requirement:

1304C.0.4 Solid waste: Areas provided for recycling, composting and trash storage, collection and loading, including any chute systems, must be designed for equal convenience for all users to separate those three material streams, and must provide space to accommodate a sufficient quantity and type of containers to be compatible with current methods of collection.

San Francisco Mandatory Recycling and Composting Ordinance

To help San Francisco move closer to its goal of zero waste by 2020, the Mandatory Recycling and Composting Ordinance requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash.⁶ No one may mix recyclables, compostables, or trash, or deposit refuse of one type in a collection container designated for another type. All property owners are required to maintain and pay for adequate refuse service.

Owners or managers of apartments, condominiums, tenancies in common (TICs), food establishments, and events are required to maintain appropriate, color-coded (blue for recyclables, green for compostables, and black for trash), labeled containers in convenient locations, and to educate tenants, employees, and contractors, including janitors, on what materials go in each container. Vendors that provide disposable food service ware or to-go containers must have appropriate containers for use by customers and visitors, placed inside near a main exit.

4.14.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For utilities and service systems the analysis considers whether the proposed project would exceed the existing or proposed capacity of municipal utility systems or providers including:

- Water supply,
- Wastewater (and stormwater) conveyance and treatment, and
- Solid waste collection and disposal.

For effects on energy, please see Section 4.20.

⁵ City and County of San Francisco, San Francisco Building Inspection Commission (BIC) Codes: Chapter 13C, Green Building Requirements, available online at http://www.sfenvironment.org/downloads/library/sf_green_building_ordinance_2008.pdf, accessed May 2, 2011.

⁶ City and County of San Francisco, Mandatory Recycling and Composting Ordinance, available online at http://www.sfenvironment.org/downloads/library/sf_mandatory_recycling_composting_ordinance.pdf, accessed May 2, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Significance Criteria under CEQA

The proposed project and alternatives would have a significant adverse impact to utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements;
- Result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Not comply with federal, state, and local statutes and regulations related to solid waste.

Proposed Project

Impact UT-1: Effects on Wastewater Conveyance and Treatment

NEPA: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment. (Less than Significant)

CEQA: The proposed project would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)

Wastewater flows from residential and retail commercial uses are primarily a factor of indoor water use. A conservative wastewater flow factor of 95 percent of water demand was used based on San Francisco historical water demand to wastewater flow ratios.⁷ Using this ratio, the proposed project would generate approximately an additional 0.17 mgd or 126 gpm, based upon the water demand calculated by the SFPUC Water Supply Assessment (see Impact UT-4, below).

⁷ City and County of San Francisco, 2030 Sewer System Master Plan, Task 100 Technical Memorandum No. 102 Wastewater Flow and Load Projections, Final Draft August 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The SFPUC's SEWPCP treats approximately 63 mgd during dry weather with a total capacity of 150 mgd; thus during dry weather there is adequate capacity for the 0.18 mgd wastewater flows from the proposed project.

Regarding wet weather flow, during large storm events that exceed the capacity of the SEWPCP, North Point Wet Weather Facility and Bayside Wet Weather Facilities, the City is permitted to discharge into the San Francisco Bay via combined sewer overflow structures.

The project sponsor would be required to prepare and implement a stormwater management plan to ensure there are no impacts to the surrounding stormwater collection system. Conservatively assuming that the entire 0.18 mgd of project-related water demand exits the site as wastewater, project wastewater flows would represent 0.12 percent of the secondary treatment wet weather capacity of the SEWPCP. This incremental increase would not exceed the capacity of the drainage system or the SEWPCP or contribute to a violation of current wastewater treatment and discharge requirements.

No new wastewater collection and treatment facilities would be required to serve the proposed project. The project would meet wastewater pre-treatment requirements of the SFPUC, as required by the San Francisco Industrial Waste Ordinance.⁸ While the proposed project would add to sewage flows in the area, it would not cause collection treatment capacity of the sewer system in the City to be exceeded.

As explained in Chapters 1 and 2, the existing sewer infrastructure on the project site does not adequately accommodate sewage flows. The project would include construction of new underground utility infrastructure with appropriate tie-ins to existing utilities. These improvements would be sized to accommodate the increased flows from the proposed project.

The proposed project would result in a *less-than-significant* impact under NEPA because it would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment.

The proposed project would result in a *less-than-significant* impact under CEQA because it would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Mitigation: None required.

⁸ San Francisco Public Works Code, Article 4.1 (amended by Ordinance No. 19-92, January 13, 1992).

Impact UT-2: Effects Related to Construction of New Facilities

NEPA: This topic is not separately analyzed under NEPA.

CEQA: The proposed project would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with mitigation)

As described above under Impact UT-1, the project would increase wastewater flows from the project site, but not to an extent that would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. As stated below under Impact UT-4, the project would be served by the SFPUC, which has adequate water supply available.

The project's increased residential units and new street layout would require the construction of a modified water distribution and wastewater collection network. The construction of this system, however, would not in and of itself cause significant environmental effects. Any effects on the environment associated with construction of this system have been identified in the relevant topic areas of this EIR/EIS, and they would be mitigated to less-than-significant levels with implementation of the mitigation measures identified in those sections. In addition, the project would not require the construction of new treatment facilities or expansion of existing facilities. As described in Section 3.14, the partially-completed Sunnydale Auxiliary Sewer Project will reduce localized wastewater and stormwater flooding in the Visitacion Valley area during storms.

The impact would be *less than significant with mitigation* under CEQA because although the proposed project would require the construction of new wastewater collection facilities, the construction of these facilities could cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact UT-3: Effects on Stormwater Conveyance and Treatment

NEPA: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment. (Less than Significant)

CEQA: The proposed project would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

Although the proposed project would increase the amount of impervious surfaces on the project site compared to existing conditions, the SFPUC has made the determination that the Sunnydale-

Velasco project will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events. Therefore, the project would be designed with a stormwater management system that would meet the City's Stormwater Management Ordinance requirements. The proposed project would collect, detain and potentially retain some stormwater within the project site such that the rate and amount of stormwater run off from the site does not negatively impact the capacity of the City's treatment facilities. Moreover, as described in Section 3.14, the partially-completed Sunnydale Auxiliary Sewer Project will reduce localized wastewater and stormwater flooding in the Visitacion Valley area during storms.

Any effects on the environment associated with construction of the on-site stormwater collection system have been identified in the relevant topic areas of this EIR/EIS. All construction-related impacts would be less than significant with mitigation measures identified in those topic areas.

The impact would be *less than significant* under NEPA because the proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment.

The impact would be *less than significant with mitigation* under CEQA because the proposed project would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact UT-4: Effects on Water Supply

NEPA: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply. (Less than Significant)

CEQA: The proposed project would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements. (Less than Significant)

As stated in Section 4.14, water is provided by the San Francisco Public Utilities Commission (SFPUC), which provides both water supply and wastewater collection and treatment. In March 2013, SFPUC updated citywide water supply and demand projections with the *2013 Water Supply*

*Availability Study.*⁹ According to the study, 2015 available water supply will be 83.5 million gallons per day (mgd). Retail water use¹⁰ will be 83.7 mgd in 2015, comprising 78.1 mgd of in-City retail and irrigation use and 5.6 mgd of suburban retail use. Total retail demand is expected to hold relatively steady, to 83.4 mgd in 2020 and 84.2 mgd in 2035, due primarily to expected growth in business and industry. The SFPUC plans to augment local supplies by extracting up to 4 mgd of groundwater from new wells in the City's Westside Basin, as well as 1.5 mgd of recycled water from new recycled water projects. Total retail supply is expected to increase to 88.8 mgd by 2035.¹¹ The SFPUC can meet the current and future demand in years of average or above-average precipitation. It can also meet future water demand in single-dry-year and multiple-dry-year events, with the exception of 2015. (The project would not have made substantial progress by this time.) With an in-place Water Shortage Allocation Plan, and the addition of local WSIP supplies, the SFPUC concluded that it has sufficient water available to serve existing customers and planned future uses.

Pursuant to SB 610, the SFPUC prepared a Water Supply Assessment (WSA) for the proposed project. The WSA found that the proposed project would generate a net increase in potable water demand of approximately 0.18 mgd. Based on this demand, the SFPUC determined that no new water delivery facilities would be required to serve the proposed project.^{12,13}

The proposed project would be subject to the City's Residential Water Conservation Ordinance, Commercial Water Conservation Ordinance, and Water Efficient Irrigation Ordinance, all of which are designed to minimize water use, and would be designed to incorporate water-conserving measures, such low-flush toilets and urinals, as required by the water conservation ordinances and Chapter 4 of the *California Plumbing Code*. Moreover, as a LEED®-certified project, the proposed project would incorporate water-saving and waste management features that would reduce water consumption by 20 percent compared to comparable non-LEED®-certified structures.

Therefore, the NEPA impact would be *less than significant* because the proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply.

The CEQA impact would be *less than significant* because the proposed project would have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements.

Mitigation: None required.

⁹ SFPUC, *2013 Water Availability Study for the City and County of San Francisco*, March 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ Retail water use is distinguished from wholesale use, under which the SFPUC provides potable water to other water agencies.

¹¹ SFPUC, *2013 op. cit.*

¹² Sunnydale Development Co., LLC, *Revised Sunnydale-Velasco HOPE-SF Master Plan Project Demand Memo*, June 28, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹³ Public Utilities Commission, City and County of San Francisco, Resolution 13-0111, July 9, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Impact UT-5: Effects on Solid Waste Collection and Disposal

NEPA: The proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal. (Less than Significant)

CEQA: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (Less than Significant)

Solid waste from the project site would be collected and hauled to the transfer station near Candlestick Point, and recycled as feasible, with non-recyclables being disposed of at the Altamont Landfill in Alameda County. The Altamont Landfill has a permitted peak maximum daily disposal of 11,150 tons per day and accepted 1.06 million tons in 2009, down from 1.31 million tons in 2005. The landfill has an estimated remaining capacity of approximately 46 million cubic yards, or 74 percent of its permitted capacity. The estimated closure date of the landfill is 2025.¹⁴ As noted in Section 3.14, San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology that could result in the City's solid waste being disposed of at the Ostrom Road Landfill. The ultimate determination with respect to future landfill contracting will be made by the Board of Supervisors on the basis of solid waste planning efforts being undertaken by the City's Department of the Environment.

Conservatively assuming a waste-generation rate of 12.3 pounds of waste per household per day,¹⁵ and that generally one unit has one household, the proposed project's additional 915 units would generate an additional 11,255 pounds of waste per day, or 2,000 tons per year. Assuming a waste-generation rate of 5 pounds of waste per 1,000 feet of commercial space,¹⁶ the project's net new 16,000 square feet of retail would generate 16 pounds of waste per day, or 3 tons per year.

The City of San Francisco estimates that it diverted 80 percent of its waste from landfills in 2011.¹⁷ This diversion rate through recycling and other methods would result in a lesser share of total waste that requires deposition into the landfill. Given this, the solid waste generated by project construction and operation would not result in the landfill exceeding its permitted capacity, and the project would result in a less-than-significant solid waste generation impact. The proposed project would be subject to the City's Mandatory Recycling and Composting Ordinance, which requires all San Francisco residents and commercial landlords to separate their refuse into

¹⁴ California Integrated Waste Management Board, Active Landfill Profiles, Altamont Landfill, <http://www.calrecycle.ca.gov/Profiles/Facility/Landfill/LFPProfile2.asp?COID=3&FACID=01-AA-0009>, accessed May 27, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁵ CalRecycle, Waste Characterization, available online: <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm>, accessed August 11, 2014.

¹⁶ CalRecycle, Waste Characterization, available online: <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Commercial.htm>, accessed August 11, 2014.

¹⁷ San Francisco Office of the Mayor, *Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America*, Press Release: October 5, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

recyclables, compostables, and trash, thereby minimizing solid waste disposal and maximizing recycling. The project would also be subject to the San Francisco Green Building Ordinance, which requires all construction and demolition debris to be transported to a registered facility that can divert a minimum of 75 percent of the material from landfills.

The NEPA impact would be *less than significant* because the proposed project would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal.

The CEQA impact would be *less than significant* because the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Mitigation: None required.

Impact UT-6: Effects Related to Regulations of Solid Waste

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

The California Integrated Waste Management Act of 1989 (AB 939) required municipalities to adopt an Integrated Waste Management Plan (IWMP) to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. As stated in Section 3.14, the City currently diverts 80 percent of its waste from landfills, which is a higher rate than any other city in the nation.¹⁸ Also, the City's per resident disposal target rate is 6.6 pounds per person per day (PPD), and its per employee disposal target rate is 10.6 PPD. In 2011, which is the most recent date for which data are available, the measured disposal rate was 2.9 PPD for residents and 4.4 PPD for employees, thereby meeting the City's target rates.¹⁹

The San Francisco Green Building Ordinance requires a minimum of 75 percent of all construction and demolition debris to be recycled and diverted from landfills. Furthermore, the project would be required to comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Altamont Landfill is required to meet federal, state and local solid waste regulations.

¹⁸ San Francisco Office of the Mayor, *Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America*, Press Release: October 5, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁹ CalRecycle, Jurisdiction Diversion / Disposal Rate Summary, available online: <http://www.calrecycle.ca.gov/LGCentral/DataTools/Reports/DivDispRtSum.htm>, accessed February 20, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Implementation of the proposed project would not impede the City from meeting these requirements.

The CEQA impact would be *less than significant* because the proposed project would comply with federal, state, and local statutes and regulations related to solid waste.

Mitigation: None required.

Proposed Project Variant

Under the project variant, there would be 62 fewer dwelling units than the proposed project, potentially resulting in a slightly lesser population on the site. The impact to utilities and service systems would be slightly less than the proposed project. Therefore, the utilities and service systems impact analysis would be the same or less than for the proposed project, and impacts would be *less than significant* under both CEQA and NEPA.

Alternative A: Reduced Development / Density Alternative

Impact A-UT-1: Effects on Wastewater Conveyance and Treatment

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)

The Reduced Development / Density Alternative's 587 net new units would be fewer than the 915 net new units of the proposed project. Therefore, the alternative would increase wastewater generation as compared to existing conditions, but to a lesser volume than would the proposed project. The alternative would result in a potable water demand of approximately 0.14 mgd. Conservatively assuming 95 percent of that water leaves the site as wastewater, the alternative would generate 0.13 mgd, or 95 gpm, of wastewater.

As stated above under Impact UT-1, the proposed project would result in less-than-significant impacts to wastewater conveyance and treatment. Therefore, the lower volume of wastewater that would be generated under the alternative would result in less-than-significant impacts to wastewater conveyance and treatment. Therefore, the alternative would result in a *less-than-significant* NEPA impact because it would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment.

Therefore, the proposed project would result in a *less-than-significant* CEQA impact because it would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Mitigation: None required.

Impact A-UT-2: Effects Related to Construction of New Facilities

NEPA: This topic is not separately analyzed under NEPA.

CEQA: The Reduced Development / Density Alternative would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

As stated under Impact A-UT-1, the alternative would increase wastewater flows from the project site by 0.13 mgd, which would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board. As discussed in A-UT-4, the alternative would generate water demand of 0.14 mgd. SFPUC has adequate water supply available to meet this demand. The alternative would result in less demand for water supply and wastewater treatment than would the proposed project.

Like the proposed project, the alternative would require the construction of a modified water distribution and wastewater collection network to serve the new buildings at the project site. The construction of this network and environmental effects have been identified in the applicable topics of this EIR/EIS. All construction-related impacts would be less than significant with the implementation of mitigation measures identified in under those topics.

The CEQA impact would be *less than significant with mitigation* because the alternative would require the construction of new treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact A-UT-3: Effects on Stormwater Conveyance and Treatment

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

Like the proposed project, the alternative would require the modification of the existing on-site stormwater collection system. The SFPUC has made the determination that the alternative will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events. The construction of this network and environmental effects have been identified in the applicable topics of this EIR/EIS. All construction-related impacts would be less than significant.

Any effects on the environment associated with construction of the on-site stormwater collection system have been identified in the relevant topic areas of this EIR/EIS. All construction-related impacts would be less than significant with implementation of the mitigation measures identified under those topics.

The impact would be *less than significant* under NEPA because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment.

The impact would be *less than significant* under CEQA because the alternative would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact A-UT-4: Effects on Water Supply

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements. (Less than Significant)

The alternative's 587 net new units would be fewer than the 915 net new units of the proposed project. These units, as well as the alternative's community facilities and retail space, would increase the water demand at the project site. Given the alternative would result in 20 percent fewer units than the proposed project (1,372 total units under the alternative vs. 1,700 total units under the proposed project), it would result in a net increase in potable water demand of approximately 0.14 mgd. This increased water demand would be less than the increased water demand of the proposed project, which was found to be less than significant.

Therefore, the NEPA impact would be *less than significant* because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply.

The CEQA impact would be *less than significant* because the alternative would have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements.

Mitigation: None required.

Impact A-UT-5: Effects on Solid Waste Collection and Disposal

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would be served by a landfill with sufficient permitted capacity to accommodate the alternative's solid waste disposal needs. (Less than Significant)

Assuming a waste-generation rate of 12.3 pounds of waste per household per day,²⁰ and that generally one unit has one household, the Reduced Development / Density Alternative's 587 net new units would generate an additional 7,337.5 pounds of waste per day, or 1,340 tons per year. The 16,000 square feet of retail space would generate 3 tons per year of waste. Therefore, under

²⁰ CalRecycle, Waste Characterization, available online: <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Residential.htm>, accessed August 11, 2014.

operations, the alternative would generate less waste than would the proposed project. Construction and demolition waste would be comparable to the proposed project, or slightly less. As discussed under Impact UT-6, the proposed project would not result in the Altamont or Ostrom Road landfill exceeding its permitted capacity. Therefore, the lower volume of waste generated by the alternative would not result in these landfills exceeding their capacities.

The NEPA impact would be *less than significant* because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal.

The CEQA impact would be *less than significant* because the alternative would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Mitigation: None required.

Impact A-UT-6: Effects Related to Regulations of Solid Waste

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

The alternative would comply with San Francisco Green Building Ordinance, which requires a minimum of 75 percent of all construction and demolition debris to be recycled and diverted from landfills. It would also comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. The alternative would meet federal, state and local solid waste regulations.

The CEQA impact would be *less than significant* because the alternative would comply with federal, state, and local statutes and regulations related to solid waste.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-UT-1: Effects on Wastewater Conveyance and Treatment

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment. (No Impact)

CEQA: The One-for-One Replacement Alternative would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (No Impact)

Under this alternative, the existing 785 units would be replaced on a one-for-one basis in the same floor plans and site plans as under existing conditions. There would be no increase in residential units or the size of other uses at the project site. Wastewater flows from the Sunnydale and Velasco housing complexes would not increase as a result of this alternative. Replacement of existing plumbing and fixtures could lower water usage at the site, which would lower wastewater generation.

Therefore, the alternative would result in *no impact* under NEPA because it would not exceed the existing or proposed capacity of municipal utility systems or providers of wastewater conveyance and treatment.

Therefore, the proposed project would result in *no impact* under CEQA impact because it would not exceed wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Mitigation: None required.

Impact B-UT-2: Effects Related to Construction of New Facilities

NEPA: This topic is not separately analyzed under NEPA.

CEQA: The One-for-One Replacement Alternative would require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

One-for-one replacement of all existing buildings would include replacement of some or all of the existing water conveyance and wastewater collection networks at the project site. The construction of this network and environmental effects have been identified in the applicable topics of this EIR/EIS. All construction-related impacts would be less than significant with implementation of the mitigation measures identified in those sections.

Given that the alternative would not change the total residential unit count or square footage of other uses at the project site, no net new wastewater would be generated, and no net new water demand would occur. Therefore, the alternative would not require the construction of new off-site treatment facilities or expansion of existing facilities.

The CEQA impact would be *less than significant with mitigation* because the alternative requires the construction of new treatment facilities or expansion of existing facilities, the construction of which could not cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact B-UT-3: Effects on Stormwater Conveyance and Treatment

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

Although this alternative would not increase the number of residential units, and buildings would be located in approximately the same locations as under existing conditions, the alternative would require the modification of the existing on-site stormwater collection system. As with the proposed project, the construction of this network and environmental effects have been identified in the applicable topics of this EIR/EIS. All construction-related impacts would be less than significant with mitigation measures identified in those sections, listed below.

The impact would be *less than significant* under NEPA because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of stormwater conveyance and treatment.

The impact would be *less than significant with mitigation* under CEQA because the alternative would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, but these impacts would be mitigated to a less-than-significant level by the measures listed below.

Mitigation Measure M-CP-2: Archeological Testing Program.

Mitigation Measure M-CP-4: Inadvertent Discovery of Human Remains.

Mitigation Measure M-NO-1a: Construction Specifications to Reduce Noise Levels During Construction.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact B-UT-4: Effects on Water Supply

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply. (No Impact)

CEQA: The One-for-One Replacement Alternative would have sufficient water supply available to serve the project from existing entitlements and resources, and would not require new or expanded water supply resources or entitlements. (No Impact)

The replacement of the existing 785 units on a one-for-one basis would not increase water demand at the project site. Installation of more efficient plumbing and fixtures could lower water demand as compared to existing conditions. The alternative would not increase water demand from existing entitlements and resources.

Therefore, under NEPA there would be *no impact* because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of water supply.

Under CEQA there would be *no impact* because the alternative would have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements.

Mitigation: None required.

Impact B-UT-5: Effects on Solid Waste Collection and Disposal

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would be served by a landfill with sufficient permitted capacity to accommodate the alternative's solid waste disposal needs. (Less than Significant)

The alternative would also be subject to the City's Green Building Ordinance, which requires all construction and demolition debris to be transported to a registered facility that can divert a minimum of 75 percent of the material from landfills. Upon completion of construction, the number and size of uses at the project site would be the same as under existing conditions. Operationally, the alternative would generate approximately the same amount of waste as under existing conditions. The Altamont and Ostrom Road landfills would have sufficient capacity to accommodate these waste disposal needs.

The NEPA impact would be *less than significant* because the alternative would not exceed the existing or proposed capacity of municipal utility systems or providers of solid waste collection and disposal.

The CEQA impact would be *less than significant* because the alternative would only increase waste disposal needs during construction, and those needs would be served by a landfill with sufficient permitted capacity.

Mitigation: None required.

Impact B-UT-6: Effects Related to Regulations of Solid Waste

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

As stated under Impact B-UT-5, the alternative would comply with the Green Building Ordinance, which requires a minimum of 75 percent of all construction and demolition debris to be recycled and diverted from landfills. As under existing conditions, the alternative would also comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash.

The CEQA impact would be *less than significant* because the alternative would comply with federal, state, and local statutes and regulations related to solid waste.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, no construction or operational changes would occur at the project site. There would be no substantial change in the existing demand for water, wastewater treatment, or solid waste disposal. The project site would continue to be subject to sewage backups, with flooding into the streets, as under existing conditions. There would be *no impact* to utilities and service systems under both CEQA and NEPA.

4.14.3 Cumulative Impacts

Impact CC-UT: Cumulative Impacts to Utilities and Service Systems

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts. (Less than Significant)

The geographic context for impacts to utilities and service systems are the service areas for the applicable service providers.

Proposed Project, Variant, and Alternative A

Water

The proposed project and the Reduced Development / Density Alternative, when combined with past, present, and reasonably foreseeable future development, would increase demand for water, wastewater treatment, and solid waste disposal services. The SFPUC WSA prepared for the proposed project incorporates future growth projections in assessing future water demand. The WSA indicates that SFPUC would be able to provide water supply to the increase populations at the site when considering the existing and future service demands.

Wastewater

Regarding wastewater, the increased residential population of the proposed project and the Reduced Development / Density Alternative would increase wastewater generation. Conservatively assuming that the entire 0.18 mgd of project-related water demand exits the site as wastewater, project wastewater flows would represent a 0.29 percent increase of the 63 mgd average dry weather flow to the SEWPCP. This incremental increase would not be cumulatively considerable given the total flows, which as discussed under Impact UT-1, can be accommodated at the SEWPCP.

In addition, as stated in Section 3.15, SFPUC is in the process of implementing a Sewer System Improvement Program that anticipates long-term development within San Francisco pursuant to existing land use controls. These improvements include the Sunnydale Auxiliary Sewer Project, which will reduce local wastewater and stormwater flooding during peak storm events, including wastewater flows from the Visitacion Valley /Schlage Lock Special Use District. Cumulative impacts on wastewater and stormwater systems would be less than significant.

Stormwater

Regarding stormwater, the SFPUC has made the determination that the Sunnydale-Velasco project will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate

and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events. Therefore, the project would be designed with a stormwater management system that would meet the City's Stormwater Management Ordinance requirements. The project would not result in increased stormwater flows from the project site.

Pursuant to the Stormwater Management Ordinance, cumulative projects constructed pursuant to these plans would be required to prepare Stormwater Control Plans meeting the same or similar requirements. These plans would include on-site stormwater management using low impact design (LID) strategies, also known as green infrastructure. These strategies include vegetated roofs, swales, rainwater harvesting, and rain gardens.

In addition, the Candlestick-Hunter's Point development would construct a separate stormwater sewer on site, and therefore only contribute wastewater to the combined sewer system.²¹ Moreover, the May 2014 addendum to the Visitacion Valley Redevelopment Program EIR determined that the modified development program would result in less-than-significant project- and cumulative-level impacts to utilities and service systems, including stormwater facilities.

Therefore, cumulative projects would not require construction of new off-site stormwater drainage infrastructure, and the impact would be less than significant.

Solid Waste

The City's per resident disposal target rate is 6.6 pounds per person per day (PPD), and its per employee disposal target rate is 10.6 PPD. In 2011, which is the most recent date for which data are available, the measured disposal rate was 2.9 PPD for residents and 4.4 PPD for employees, thereby meeting the City's target rates.²²

As stated above, the City and County of San Francisco has committed to achieving zero waste to landfill by 2020, and it achieved an 80 percent diversion rate in 2011.²³ Increased waste generation from the project, the Reduced Development / Density Alternative, and cumulative development would be partially offset by existing San Francisco ordinances and policies regarding waste reduction. All alternatives would comply with the Green Building Ordinance, which requires a minimum of 75 percent of all construction and demolition debris to be recycled and diverted from landfills. As under existing conditions, the all alternatives would also comply with the City's Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Cumulative development projects would be required to comply with these ordinances, as well. These developments would have a similar waste generation profile to existing development in

²¹ San Francisco Planning Department, *Candlestick Point-Hunter's Point Shipyard Phase II Development Plan EIR*, Case No. 2007.0946E, November 2009.

²² CalRecycle, Jurisdiction Diversion / Disposal Rate Summary, available online: <http://www.calrecycle.ca.gov/LGCentral/DataTools/Reports/DivDispRtSum.htm>, accessed February 20, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²³ San Francisco Office of the Mayor, *Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America*, Press Release: October 5, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

the City. Therefore, the increased generation of solid waste from these developments would not exceed permitted landfill capacity, and the impact would be less than significant.

Alternative B

Regarding the One-for-One Replacement Alternative, it would not result in an increase in on-site population compared to existing conditions. They would not contribute to cumulative operational demands for water, wastewater treatment, or solid waste disposal. The impact would be *less than significant*.

Summary

In summary, the impacts under NEPA would be **less than significant** because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts.

The impacts under CEQA would be **less than significant** because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse utilities and service systems impacts.

4.15 Public Services

4.15.1 Regulatory Framework

Federal

There are no federal regulations related to provision of public services.

State

California Fire Code

State fire regulations are set forth in Sections 13000, et seq. of the *California Health and Safety Code*, which includes regulations concerning building standards (as set forth in Title 24 of the *California Code of Regulations*, the *California Building Code*), fire protection and notification systems, fire protection devices (such as fire extinguishers and smoke alarms), high-rise building and child care facility standards, and fire suppression training. *California Fire Code* Section 403.2 addresses public safety for both indoor and outdoor gatherings, including emergency vehicle ingress and egress, fire protection, emergency medical services, public assembly areas and the directing of both attendees and vehicles (including the parking of vehicles), vendor and food concession distribution, and the need for the presence of law enforcement and fire and emergency medical services personnel at an event.

Regional and Local

San Francisco Police Code

The *San Francisco Police Code* contains regulations for various types of activities such as automobile use, permitting and licensing, use of ports, and disorderly conduct.

San Francisco Fire Code

The *San Francisco Fire Code* was revised in 2013 to regulate and govern the safeguarding of life and property from fire and explosion hazards arising from the storage, handling, and use of hazardous substances, materials, and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises; to provide for the issuance of permits, inspections, and other SFFD services; and to provide for the assessment and collection of fees for those permits, inspections, and services. The SFFD reviews building plans to ensure that fire and life safety is provided and maintained in buildings that fall under its jurisdiction. SFFD plan review applies to all of the following occupancy types:

- All Assembly Occupancies (including restaurants and other gathering places for 50 or more occupants)
- All Educational Occupancies (including commercial day care facilities)
- All Hazardous Occupancies (including repair garages, body shops, fuel storage, and emergency generator installation)

- All Storage Occupancies where potential exists for high-piled storage as defined by *Fire Code*
- All Institutional Occupancies
- All High-Rise Buildings of all occupancies
- Residential Occupancies, such as hotels, motels, lodging houses, residential care facilities, apartment houses, small- and large-family day care homes, and R-1 artisan buildings (which are residential buildings with commercial workshop or kitchen spaces. This excludes minor residential repairs such as kitchen and bath remodeling and dry rot repair)
- Certified family-care homes, out-of-home placement facilities, halfway house, drug and/or alcohol rehabilitation facilities
- Tents, awnings, or other fabric enclosures used in connection with any occupancy
- All fire alarm and fire suppression systems

In coordination with the San Francisco Department of Building Inspection, the SFFD conducts plan checks to ensure that all structures, occupancies, and systems outlined above are designed in accordance with the *San Francisco Fire Code* prior to the issuance of a building permit.

Senate Bill 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2014, the State Allocation Board (SAB) approved maximum Level 1 developer fees at \$0.54 per square foot of enclosed and covered space in any commercial or industrial development, and \$3.36 per square foot for residential development.¹ These fees are intended to address the increased educational demands on the school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

Local jurisdictions are precluded under state law (Senate Bill 50) from imposing school-enrollment-related mitigation beyond the school impact fees. The collection of these fees, therefore, is considered to fully mitigate any potential effects on schools associated with additional development.

Libraries

There are no applicable regulations for the analysis of impacts to libraries.

¹ State Allocation Board (SAB), Meeting Actions, www.documents.dgs.ca.gov/opsc/Resources/Index_Adj_Dev.pdf, *Developer Fee Adjustment*, January 22, 2014. Level I fees are the lowest of three tiers of fees, and require a school district to conduct a justification study to establish a connection between development-generated increases in enrollment and the cost of facilities needed to house the new students. Higher fees are applicable if a district applies for state construction funding.

4.15.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For public services the analysis considers whether the proposed project would exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for:

1. police services,
2. fire protection and emergency medical services,
3. schools, or
4. libraries.

Significance Criteria under CEQA

The proposed project would have a significant adverse impact related to public services if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for:
 - fire protection;
 - police protection;
 - schools; and
 - libraries.

Proposed Project

Impact PS-1: Effects on Public Services

NEPA: The proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries. (Less than Significant)

CEQA: The proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries. (Less than Significant)

The project would involve demolition of existing units and construction of replacement units. Construction activities could temporarily increase demand for fire or police protection services, but it would not require new or expanded facilities.

Operations: Fire and Police Protection

The project would increase development on the site. Total residential units would increase by 915, and total square footage would increase by 2,049,000 square feet. As stated in Section 4.05, the increase in residential units would increase population by almost 2,000 residents. This more intense development at the project site would increase the demand for fire protection, but not in excess of amounts expected and provided for in this area. Based on the size of the project, the San Francisco Fire Department would not require additional resources to provide fire protection service to the project and the project would not result in the need for a new or physically expanded fire station.² In addition, new buildings would be constructed to meet current fire code requirements.

Regarding police protection, the project would include office space that would function as a replacement on-site police substation. With this replacement substation unit, the Police Department would be able to accommodate the proposed project and associated population without the need for a new or expanded police facility.³ The environmental effects associated with construction and operation of this office space have been evaluated in the applicable topics of this EIR/EIS.

Operations: Schools

The proposed project includes new residential development which would generate students who would attend local public schools. It is conservatively assumed that students would be new to the district and would attend public schools, though it is likely that a portion of the students would already be enrolled within the San Francisco Unified School District (SFUSD) or would attend a private school.

According to a 2010 SFUSD enrollment study, the 767 units of the Sunnydale housing complex had a K–12 student yield 0.77 students per non-senior occupied unit.⁴ The study also found that market-rate condominiums contained virtually no public school students, although it noted that HOPE SF projects' market-rate housing would be tailored to middle-income families that could bring additional students to San Francisco. In projecting enrollment through 2035, the study used a mixed yield of 0.50 students per housing unit, regardless of affordability or tenure of the unit.

As stated in the Project Description, the proposed project would result in 915 new residential units, of which 694 units would be market-rate units, 71 units would be affordable family units, and 150 units would be affordable senior units.

Assuming the 2010 SFUSD HOPE SF student yield factor of 0.50 students per unit, the 765 (694 market rate + 71 affordable) new family units would result in 383 new students. **Table 4.15-1** shows the distribution of these new 383 students among the schools that serve the project site, assuming an even distribution of approximately 29 students per grade. Schools in the vicinity of the project site have adequate capacity to serve this increased population, as shown in Table 4.15-1. The

² Fire Marshal Barbara Schultheis, San Francisco Fire Department, Personal Communication, March 8, 2011.

³ Captain Louis Cassanogo, Ingleside Police Station, Personal Communication, September 22, 2010.

⁴ Lapkoff & Gobalet Demographic Research, *Demographic Analysis and Enrollment Forecasts for the San Francisco Unified School District*, March 18, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

remaining 150 senior units of the project are not expected to include families with children, and therefore are not expected to have any effect on schools in the SFUSD.

**TABLE 4.15-1
SCHOOL ENROLLMENT AND CAPACITY**

	Capacity ¹	2010 Enrollment ²	2010 Remaining Capacity	Potential Students from Proposed Project
Visitation Valley Elementary School (K–5)	750	434	260	177
Visitation Valley Middle School (6–8)	850	257	593	88
June Jordan School for Equity High School (9–12)	1,250	240	1,010	59
Philip & Sala Burton High School (9–12)	1,925	749	1,176	59

SOURCE:

¹ SFUSD, *Capital Plan FY 2010-2019*, September 2009

² SFUSD, School Site and List Summary, October 6, 2010.

SFUSD currently uses a diversity index lottery system to assign students to schools based on a number of factors including parental choice, school capacity, and special program needs.⁵ Under the diversity index lottery system, the students generated by the proposed project may attend a SFUSD school other than the nearest schools; however, that school would have to have capacity. Thus, the assumption that all students generated by the proposed project would attend the nearest school is a conservative assumption of the impact on the students' default school assignment.

Although development of the proposed project could indirectly increase resident population and potential student enrollment in the SFUSD, payment of fees mandated under SB 50 prescribed by the statute is deemed full and complete mitigation. Fees would be paid by the project sponsor or successor developer to the Department of Building Inspection at the time of building permit application.⁶

Operations: Libraries

The Visitation Valley Branch of the San Francisco Public Library is half a mile east of the project site. The Excelsior Branch is located about 1 mile to the northwest, and the Portola Branch is about 1.1 miles to the northwest. These library branches are either new or are being remodeled and their capacities expanded as a result of the Branch Library Improvement Program. They would continue to serve the increased population of the project site. Library services and facilities are funded primarily through voter-approved bond measures and the General Fund, which

⁵ SFUSD, History of the Student Assignment Method, available online at: http://portal.sfusd.edu/apps/departments/educational_placement/HistoryStudentAssignment.pdf, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ San Francisco DBI, Development Impact Fee – Collection Process and Procedure, web page: although development under the Specific Plan could indirectly increase resident population and potential student enrollment in the SFUSD, payment of fees mandated under SB 50 prescribed by the statute is deemed full and complete mitigation., accessed August 1, 2014.

receives revenue from a range of sources including property taxes and development fees. The proposed project would contribute to library funding through property taxes and development fees that would be proportionate to the increased demand in library services. Therefore, the project would not require new or expanded library facilities.

Conclusion

The impact would be *less than significant* under NEPA because the proposed project would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries.

The impact would be *less than significant* under CEQA because the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries.

Mitigation: None required.

Proposed Project Variant

The project variant would result in a residential development with 853 net new units, which would be fewer than the 915 net new units under the proposed project. These 853 new units would generate demands for fire protection, police protection, schools, and libraries at similar (or slightly lesser) levels to those of the proposed project. For the reasons discussed above, impacts to public services would be *less than significant* under both NEPA and CEQA.

Mitigation: None required.

Alternative A: Reduced Development / Density Alternative

Impact A-PS-1: Effects on Public Services

NEPA: The Reduced Development / Density Alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries. (Less than Significant)

The Reduced Development / Density Alternative would involve demolition of existing units and construction of replacement units. Construction activities could temporarily increase demand for fire or police protection services, but it would not require new or expanded facilities.

Under operations, the Reduced Development / Density Alternative's 1,372 units (587 net new units) would increase the demand for public services, but to a lesser extent than would the proposed project. The San Francisco Fire Department and San Francisco Police Department would not require additional resources to provide fire protection service to the project site. The alternative would include a police substation, similar to the proposed project. Fewer total students would be generated than under the proposed project. Therefore, would not result in the need for a new or physically expanded fire station, police station, or schools.

The impact would be *less than significant* under NEPA because the alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries.

The impact would be less than significant under CEQA because the alternative would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-PS-1: Effects on Public Services

NEPA: The One-for-One Replacement Alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries. (Less than Significant)

The One-for-One Replacement Alternative would involve demolition of existing units and construction of replacement units. Construction activities could temporarily increase demand for fire or police protection services. The operational capacity of the project site, however, would be the same under the alternative as it is under existing conditions. The alternative's operations would not

result in an increase in population at the project site or associated increased demand for fire protection, police protection, schools, or library services. Specifically regarding fire protection, the new units would be constructed to meet current fire code requirements, which could lower the frequency of fire-related calls. The alternative would include a replacement police substation.

The impact would be *less than significant* under NEPA because the alternative would not exceed the existing or proposed capacity of public services, resulting in the need for new or expanded facilities for police services, fire protection and emergency medical services, schools, or libraries.

The impact would be *less than significant* under CEQA because the alternative would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or libraries.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, no construction or operational changes would occur at the project site. There would be no change in the demand for public services, and there would be *no impact* under NEPA and CEQA.

4.15.3 Cumulative Impacts

Impact CC-PS: Cumulative Effects on Public Services

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impacts. (Less than Significant)

Proposed Project, Variant, and Alternative A

The geographic context for impacts to public services are the service areas for the applicable service providers. The proposed project, variant, and the Reduced Development / Density Alternative, when combined with past, present, and reasonably foreseeable future development, would increase demand for fire protection, police protection, schools, and libraries. As stated above, SFFD and SFPD have indicated that they would be able to service the increased

population at the site. Also, both the project and the alternative, as well as cumulative projects, would be required to pay development impact fees which would fund staffing and facilities at SFUSD and local libraries. Under SFUSD's diversity index lottery system, new students from the Plan area may attend schools elsewhere in the City. Considering the existing educational facilities citywide and in the vicinity of the Plan area, and declining enrollment trends, development under the Plan, in combination with past, present and reasonably foreseeable future projects, would not result in the need for new or physically altered school facilities and the impact would be less than significant.

Impacts would be *less than significant* under NEPA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impact.

Impacts would be *less than significant* under CEQA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse public services impact.

Alternative B

The One-for-One Replacement Alternative would not result in an increase in on-site population. These alternatives would not contribute to cumulative operational demands for police, fire protection, schools, or libraries. There would be *no impact*.

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4.16 Biological Resources

4.16.1 Regulatory Framework

This section briefly describes federal, state, and local regulations, permits, and policies pertaining to biological resources and wetlands as they apply to the proposed project.

Federal

Special-Status Species

Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects the fish and wildlife species, and their habitats, that have been identified by the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) as threatened or endangered. The term “endangered” refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their ranges. The term “threatened” refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

The FESA is administered by the USFWS and NMFS. In general, NMFS is responsible for the protection of FESA-listed marine species and anadromous fishes, whereas listed, proposed, and candidate wildlife, plant species, and fish species are under USFWS jurisdiction. “Take”¹ of listed species can be authorized through either the Section 7 consultation process (for actions by federal agencies) or the Section 10 permit process (for actions by non-federal agencies). Federal agency actions include activities located on federal land or that are conducted by a federal agency, funded by a federal agency, or authorized by a federal agency (including issuance of federal permits and licenses).

Under Section 7 of the FESA, the federal agency conducting, funding, or permitting an action (the federal lead agency) must consult the USFWS and/or NMFS, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a proposed project “may affect” a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the expected effect. In response, the USFWS issues a biological opinion determining whether (1) the proposed action may either jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding), or (2) will not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

¹ The federal ESA defines the term “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

Critical Habitat. Under the FESA, the Secretary of the Interior (or the Secretary of Commerce, as appropriate) formally designates critical habitat for certain federally listed species and publishes these designations in the Federal Register. Critical habitat is not automatically designated for all federally listed species; so many listed species have no formally designated critical habitat.

Critical habitat is defined as the specific areas that are essential to the conservation of a federally listed species, and that may require special management consideration or protection. Critical habitat is determined using the best available scientific information about the physical and biological needs of the species. These needs, or primary constituent elements, include: space for individual and population growth and for normal behavior; food, water, light, air, minerals, or other nutritional or physiological needs; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitat that is protected from disturbance or is representative of the historical geographic and ecological distribution of a species. There is no federally designated critical habitat within the project site. Critical habitat for Franciscan manzanita was designated on December 20, 2013.² It is located within McLaren Park (Unit 13), which is located west of, and outside of, the project site. The proposed project would not impact proposed critical habitat for Franciscan manzanita.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Waters of the United States and Waters of the State (Wetlands)

Federal Wetland Definition

Wetlands are a subset of waters of the United States and receive protection under Section 404 of the Clean Water Act. The term “waters of the United States,”³ as defined in the *Code of Federal Regulations* (33 CFR 328.3[a]; 40 CFR 230.3[s]), includes:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

² Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Arctostaphylos franciscana*, Final Rules, Federal Register Vol. 78, No. 125, June 28, 2013.

³ Based on the Supreme Court ruling in *Solid Waste Agency for Northern Cook County v. U.S. Army Corps of Engineers* related to federal jurisdiction over isolated waters (January 9, 2001), non-navigable, isolated, intrastate waters are no longer defined as waters of the United States based solely on their use by migratory birds. Jurisdiction over non-navigable, isolated, intrastate waters may be exercised if their use, degradation, or destruction could affect other waters of the United States or interstate or foreign commerce. According to this ruling, jurisdiction over such other waters must be analyzed on a case-by-case basis, as should impoundments of waters, tributaries of waters, and wetlands adjacent to waters. The Supreme Court’s recent decisions (*Rapanos* and *Carabel*) have yet to be finally interpreted in Corps regulations or definitions, although the Corps and U.S. Environmental Protection Agency in April 2014 issued a new proposed rule, including a definition of wetlands that would, if approved, include as jurisdictional wetlands those waters that have a “significant nexus” to traditionally navigable or interstate waters.

2. All interstate waters including interstate wetlands. (Wetlands are defined by the federal government [CFR, Section 328.3(b)] as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.)
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters which are or could be used by interstate or foreign travelers for recreational or other purposes; or from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition.
5. Tributaries of waters identified in paragraphs (1) through (4).
6. Territorial seas.
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6).

Regulation of Activities in Wetlands

The regulations and policies of various federal agencies--such as the U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency (U.S. EPA), USFWS, and NMFS--mandate that filling wetlands be avoided unless it can be demonstrated that no practicable alternatives exist. The Corps has primary federal responsibility for administering regulations that concern waters and wetlands. In this regard, the Corps acts under two statutory authorities: the Rivers and Harbors Act (Sections 9 and 10), which governs specified activities in "navigable waters," and the Clean Water Act (Section 404), which governs the fill of waters of the United States, including wetlands. The Corps requires that a permit be obtained if a project proposes to place fill in navigable waters and/or to alter waters of the United States below the ordinary high-water mark in non-tidal waters.

Executive Order 11990: Protection of Wetlands

The federal government also supports a policy of minimizing "the destruction, loss, or degradation of wetlands." Executive Order 11990 (May 24, 1977) requires that each federal agency take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. As primary screening, the U.S. Department of Housing and Urban Development (HUD) or grantees must verify whether the project is located within wetlands identified on the National Wetlands Inventory (NWI) or else consult directly with USFWS staff.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW)⁴ has the responsibility for maintaining a list of threatened and endangered species (*California Fish and Game Code*, Section 2070). CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains lists of “species of special concern,” which serve as watch lists.

CESA prohibits the take of plant and animal species designated by the Fish and Game Commission as either threatened or endangered in the State of California. “Take” in the context of CESA means to hunt, pursue, kill, or capture a listed species, as well as any other actions that may result in adverse impacts when attempting to take individuals of a listed species. The take prohibitions also apply to candidates for listing under CESA. However, Section 2081 of CESA allows CDFW to authorize exceptions to the state’s take prohibition for educational, scientific, or management purposes.

Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species could be present on the project area and determine whether the proposed project could have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that could affect a candidate species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

Special-Status Natural Communities

Special-status natural communities are identified as such by the CDFW’s Natural Heritage Division and include those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The California Natural Diversity Database (CNDDB) tracks 135 such natural communities in the same way that it tracks occurrences of special-status

⁴ The California Department of Fish and Game (CDFG) formally changed its name to the California Department of Fish and Wildlife (CDFW) on January 1, 2013. In this document, references to literature and codes published by CDFW prior to Jan. 1, 2013 are cited as “CDFG.” The agency is otherwise referred to by its new name acronym, CDFW.

species: information is maintained on each site in terms of its location, extent, habitat quality, level of disturbance, and current protection measures. CDFW is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of the potential impacts of a project on biological resources of statewide or regional significance.

California Fish and Game Code

Under Section 3503 of the *California Fish and Game Code*, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors, also referred to as "birds of prey", are a valuable resource to the State of California, and therefore are protected under *Fish and Game Code* Sections 3503, 3503.5, 3505 and 3513, and *California Code of Regulation*, Title 14, Sections 251.1, 652 and 783-786.6. Code Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) allow the designation of a species as "Fully Protected."

The classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish (Code Section 5515), amphibians and reptiles (Section 5050), birds (Section 3511) and mammals (Section 4700). Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock. Thus, a greater level of protection to Fully Protected species than is afforded by CESA.

California Wetland Definition

California agencies (such as CDFW and the California Coastal Commission) have adopted the Cowardin et al. (1979) classification system to define wetlands. According to this classification system, wetlands must have one or more of the following three attributes: (1) at least periodically, the land predominantly supports hydrophytes;⁵ (2) the substrate is predominantly undrained hydric soil; or (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.⁶ CDFW does not normally assert jurisdiction over wetlands unless they are subject to Streambed Alteration Agreements (CDFG Code Sections 1600–1616) or they support state-listed endangered species.

Regulation of Activities in Wetlands

The State's authority to regulate activities in wetlands and waters resides primarily with the Regional Water Quality Control Board (RWQCB), which regulates fill in and discharges to

⁵ The USFWS has developed the following definition for hydrophytic vegetation: "plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Cowardin et al., 1979).

⁶ Cowardin, Carter, Golet, and Roe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. Performed for the U. S. Department of the Interior Fish and Wildlife Service. December, 1979.

Waters of the United States and Waters of the State of California, including activities in wetlands, under Section 401 of the Clean Water Act, and the Porter-Cologne Water Quality Control Act. CDFW provides comment on Corps permit actions under the Fish and Wildlife Coordination Act. Moreover, under Sections 1600–1616 of the *California Fish and Game Code*, CDFW regulates activities that would substantially divert, obstruct the natural flow of, or change rivers, streams, and lakes. The jurisdictional limits of CDFW are defined in Section 1602 of the *California Fish and Game Code* as the bed, channel, or bank of any river, stream, or lake.

Regional and Local

Standards for Bird-Safe Buildings

The San Francisco Board of Supervisors unanimously approved, and the mayor subsequently signed, legislation amending the *Planning Code* to incorporate bird-safe building standards into the Code. The Planning Commission has also approved *Standards for Bird-Safe Buildings*.⁷ The amendments, reviewed and recommended by the Planning Commission, introduced a new *Planning Code* Section 139, Standards for Bird-Safe Buildings.⁸ These standards guide the use and types of glass and façade treatments, wind generators and grates, and lighting treatments. The standards impose requirements for bird-safe glazing and lighting in structures or at sites that represent a hazard to birds and provide information on educational and voluntary programs related to bird hazards. The standards define two types of bird hazards. “Location-related hazards” are buildings located inside of, or within a clear flight path of less than 300 feet from, an Urban Bird Refuge.⁹ Such buildings require treatment when new buildings are constructed; additions are made to existing buildings; or existing buildings replace 50 percent or more of the glazing within the “bird collision zone.”¹⁰ The standards require implementation of the following treatments for façades facing, or located within, an Urban Bird Refuge:

- No more than 10 percent untreated glazing is allowed on building façades within the bird collision zone.
- Lighting must be shielded, and no uplighting is permitted. No event searchlights are permitted.
- Sites are not permitted to use horizontal access windmills or vertical access wind generators that do not appear solid.

⁷ San Francisco Planning Department, *Standards for Bird-Safe Buildings*, Adopted July 14, 2011. Available on the internet at: http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards_for_Bird-Safe_Buildings_8-11-11.pdf. Reviewed August 18, 2011.

⁸ San Francisco Planning Department, *Standards for Bird-Safe Buildings*, available online at http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards_for_Bird-Safe_Buildings_8-11-11.pdf, July 2011, accessed March 29, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ An Urban Bird Refuge is defined in the Standards for Bird-Safe Buildings as: any area of open space two acres or larger that is dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, water features, or wetlands; open water; and some green rooftops.

¹⁰ The “bird collision zone” is that portion of the building that begins at grade and extends upward for 60 feet.

“Feature-related hazards” include building- or structure-related features that are considered potential “bird traps” regardless of location (e.g., glass courtyards, transparent building corners, or clear glass walls on rooftops or balconies). Structures that include these elements must treat 100 percent of these elements in the building with bird safe glazing.

San Francisco Recreation and Parks Department Significant Natural Resources Areas Management Plan

The San Francisco Recreation and Parks Department (SFRPD) is currently completing a Significant Natural Resource Areas Management Plan (SNRAMP) for designated significant natural areas in the City and County of San Francisco. The purpose of the management plan is to establish a maintenance and preservation program related to the protection and enhancement of natural resource values. SNRAMP itself has not been finalized and adopted; however, the process of developing SNRAMP began in 1995, with the preparation of a staff report on the SNRAMP.¹¹ A draft *Significant Natural Resources Areas Management Plan* was prepared in February 2006; the environmental impact report was in preparation as of late 2014.¹² McLaren Park, which is immediately adjacent to the project site, was included in that plan. The plan includes a variety of recommendations for improvements in the park, such as restoration, enhancement, and maintenance work.

San Francisco Public Works Code

The San Francisco’s Urban Forestry Ordinance (Article 16 of the *Public Works Code*) protects San Francisco’s street trees, significant trees, and landmark trees regardless of species. The ordinance protects the following three categories of trees:

A **street tree** is “any tree growing within the public right-of-way, including unimproved public streets and sidewalks, and any tree growing on land under the jurisdiction of the Department [of Public Works]” as defined in Section 802 of the ordinance. Section 806b requires entities (other than the Department of Public Works) to obtain a permit from the department prior to removing any street trees.

A **significant tree** is defined in Section 810A of the ordinance as any tree: (1) located on property under the jurisdiction of the Department of Public Works or on privately owned property with any portion of its trunk within 10 feet of the public right-of-way, and (2) that satisfies at least one of the following criteria: (a) a diameter at breast height in excess of 12 inches, (b) a height in excess of 20 feet, or (c) a canopy in excess of 15 feet. Any entity other than the Department of Public Works must obtain a permit to remove significant trees according to the process described in Section 806b.

¹¹ The San Francisco Recreation and Park Commission adopted the staff report on January 19, 1995 by Resolution No. 9501-008.

¹² San Francisco Recreation and Park Department, 2006. *Significant Natural Resource Areas Management Plan Final Draft*. February 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

A **landmark tree** is any tree that: (1) has been nominated as such by a member of the public, a landowner, the San Francisco Planning Commission, the Board of Supervisors, or the Historic Preservation Commission, (2) the Urban Forestry Council (within the San Francisco Department of the Environment) has subsequently recommended as a landmark tree, and (3) is designated a landmark tree by ordinance approved by the Board of Supervisors. According to Section 810 of the ordinance, nominated trees undergoing review are protected according to the same standards as designated landmark trees until the review process is completed.

Permits are required for planting or removing street trees and significant trees, and protection measures are required for these trees if construction work would occur within the trees' dripline.

4.16.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

For biological resources the analysis considers whether the proposed project or alternatives would:

- Have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species;
- Have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level);
- Have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act;
- Interfere substantially with an existing wildlife corridor;
- Have a substantial adverse effect on locally-protected trees; or
- Conflict with an adopted habitat conservation plan.

Significance Criteria under CEQA

Implementation of the proposed project and its alternatives would have a significant effect on biologic resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Approach to Analysis

Impacts on biological resources are evaluated based on the likelihood that special-status species, sensitive habitats, wildlife corridors, and protected trees are present within the project site, and the likely effects that construction or operation might have on these resources.

For the purposes of this EIR/EIS, the word “substantial” as used in the significance criteria above is defined by the following three principal components:

- Magnitude and duration of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resource (rarity)
- Susceptibility of the affected resource to disturbance

Proposed Project

Impact BI-1: Effects on Special-Status Species

NEPA: The proposed project would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species. (Less than Significant with Mitigation)

CEQA: The proposed project would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)

Construction

As discussed under “Section 3.16, Biological Resources,” the majority of the project site is developed and highly disturbed from local foot and vehicular traffic. However, mixed exotic forest located on the western and northern edges of the site and trees located within and adjacent to the existing residential neighborhood have potential to support several special-status species. Special-status species that may potentially use the project site include Cooper’s hawk, red-tailed hawk, white-tailed kite, western red bat, and Townsend’s big-eared bat. Additionally, trees and buildings in and around the project site provide suitable habitats for breeding birds. Most native breeding birds are protected under Section 3503 of the *California Fish and Game Code* (Code), and raptors are protected under Section 3503.5 of the Code. In addition, both Section 3513 of the Code

and the Federal Migratory Bird Treaty Act (16 U.S. Code, Sec. 703 Supp. I, 1989) prohibit the killing, possession, or trading of migratory birds.

Development that would occur with implementation of the proposed project would involve removal of trees that could potentially be used for nesting by a variety of birds--as well as demolition of buildings that are vacant, or not occupied--that may be used for roosting by special-status bats. New trees would be planted in accordance with *Planning Code* requirements.¹³ Mortality of special-status birds or bats as a result of such construction activities would be considered a significant impact. This would include mortality of white-tailed kite, which is a CDFW Fully Protected species observed on the project site. Additionally, tree removal resulting in impacts to active nests or mortality of migratory birds would violate the federal Migratory Bird Treaty Act and/or the *California Fish and Game Code*, Sections 3500-3516.

FESA requires protection of listed or proposed endangered or threatened species and critical habitats. Critical habitat for Franciscan manzanita is located west of, and outside of, the project boundary and the proposed project would not impact this proposed critical habitat. Therefore, project construction would be consistent with FESA [50 CFR 402]. On April 26, 2013, the San Francisco Mayor's Office of Housing (MOHCD), serving as the federal lead agency on behalf of the U.S. Department of Housing and Urban Development, determined that the project would have "no effect" on federal listed species or critical habitat and sent a letter to USFWS to request concurrence of this determination (see **Appendix BI**). USFWS does not typically respond to no effect determinations, and has not responded as of September 2014. No other listed or proposed endangered or threatened species or critical habitats have potential to occur within the project site or have potential to be impacted by project construction.

Implementation of **Mitigation Measure M-BI-1a: Protection of Special Status Bat Species and Mitigation Measure M-BI-1b: Protection of Nesting Birds** would ensure that 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 CDFW. These measures would require pre-construction surveys and avoidance of identified species during sensitive periods when nesting would occur. The project site does not contain species protected by FESA or USFWS, and no impacts would occur to such species.

Operation

Project operations would not result in removal of trees or buildings that may support special-status species. Operations would be similar to existing site conditions and would not affect special-status species, including listed or proposed endangered or threatened species or critical habitats. Therefore, project operation would be consistent with FESA [50 CFR 402] and would not adversely affect species protected by the CDFW.

¹³ Sunnysdale Development Co., LLC, personal communication with ESA, November 13, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Conclusion

The impact would be *less than significant with mitigation* under NEPA because the proposed project could have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally-protected species, but the impact would be avoided or rendered insubstantial by implementation of Mitigation Measures M-BI-1a and M-BI-1b.

The impact would be *less than significant with mitigation* under CEQA because the proposed project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, but the impact would be avoided or rendered insubstantial by implementation of Mitigation Measures M-BI-1a and M-BI-1b.

Mitigation Measure M-BI-1a: Protection of Special Status Bat Species.

Mitigation Measure M-BI-1b: Protection of Nesting Birds.

Impact BI-2: Effects on Habitat

NEPA: The proposed project would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level). (No Impact)

CEQA: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (No Impact)

The project site does not support riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by CDFW or USFWS. SFRPD's SNRAMP identifies important bird habitat as occurring within McLaren Park less than 100 feet from the project site, however the project footprint is outside of McLaren Park. Following completion of project construction, project operation would result in similar operations to existing conditions. In addition, the project would include new sewer infrastructure, which would reduce sewer backups and improve drainage. There would be no off-site impacts to wetlands or sensitive habitat.

There would be *no impact* under NEPA because the proposed project would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level).

There would be *no impact* under CEQA because there is no riparian habitat or sensitive natural community on the project site.

Mitigation: None required.

Impact BI-3: Effects on Wetlands

NEPA: The proposed project would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act. (No Impact)

CEQA: The proposed project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (No Impact)

Pursuant to Executive Order 11990 (May 24, 1977), projects should minimize the destruction, loss, or degradation of wetlands and preserve and enhance the natural and beneficial values of wetlands. The project site is not located within wetlands identified on the National Wetlands Inventory.¹⁴ Additionally, wetlands or waters of the United States or of the State do not occur within the project site. Therefore, construction and operation of the project would be consistent with Executive Order 11990.

The project would have *no impact* under NEPA because it would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act.

The project would have *no impact* under CEQA because it does not contain federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.

Mitigation: None required.

Impact BI-4: Effects on Wildlife Movement

NEPA: The proposed project would not interfere substantially with an existing wildlife corridor. (Less than Significant)

CEQA: The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

Construction

The project site is currently developed and generally does not provide an open corridor for migratory wildlife. Project construction, which would involve demolition and construction activities, would not interfere with a wildlife corridor or native resident or wildlife corridors.

¹⁴ U. S. Fish and Wildlife Service. Publication date (found in metadata). National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>. Accessed March 29, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Operation

Several bird species utilize the project site and the adjacent McLaren Park and Gleneagles Golf Course. These birds could potentially collide with any new structures that are constructed as part of the project.

Bird Strikes and Bird-Safe Buildings. It is estimated that, in North America alone, millions of songbirds are killed as a result of collisions with buildings and other structures each year.¹⁵ Daytime collisions occur most often when birds fail to recognize window glass as a barrier. Regardless of overall height, the ground floor and first few stories of buildings present the greatest hazards to most birds; reflections of attractive ground-level features, such as vegetation, draw birds toward glass surfaces and often result in collisions. Recent increases in glass surfaces used to improve daylight in buildings can be considered a “biologically significant” issue, potentially affecting the viability of local and regional bird populations.¹⁶ Transparent features—especially buildings where birds can see through two glass surfaces to vegetation on the other side—also attract birds and cause collisions. Vegetated areas and bodies of water provide potentially valuable stopover habitat for migratory birds. Open space areas adjacent to developed areas create bird habitats in the vicinity of proposed buildings and other facilities, potentially resulting in higher bird collision risks.

Many collisions are induced by artificial night lighting, particularly from large buildings, which can be especially problematic for migrating songbirds since many are nocturnal migrants.¹⁷ The tendency of birds to move towards lights at night when migrating, and their reluctance to leave the sphere of light influence for hours or days once encountered, has been well documented.¹⁸ It has been suggested that structures located at key points along migratory routes may present a greater hazard than those at other locations.¹⁹ Other research suggests that fatal bird collisions increase as light emissions increase, that weather often plays an important part in increasing the risk of collisions, and that nights with heavy cloud cover and/or precipitation present the conditions most likely to result in high numbers of collisions.²⁰ The type of light used may affect its influence on the birds: for example, studies have indicated that blinking lights or strobe lights affect birds significantly less than non-blinking lights.²¹

¹⁵ Cornell Lab of Ornithology, 2007, Migration Pathways, available online at: <http://www.birds.cornell.edu/AllAboutBirds/studying/migration/pathways>, accessed April 5, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁶ Ogden, L.E., 1996, Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds, Special Report for the World Wildlife Fund and the Fatal Light Awareness Program, September, available online at: www.flap.org, accessed April 5, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ *Ibid.*

²⁰ Ogden, L.E., Summary Report on the Bird Friendly Building Program: Effect of Light Reduction on Collision of Migratory Birds, Special Report for the Fatal Light Awareness Program, available online: www.flap.org, January 2002, accessed April 5, 2013.

²¹ Gauthreaux, S.A., Belser, C.G., Effects of Artificial Night Lighting on Migrating Birds, In: Rich, C. and Longcore, T., *Ecological Consequences of Night Lighting*, Island Press, Covelo, CA, pp. 67-93, 2006. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The City's adopted *Standards for Bird-Safe Buildings* are discussed in Section 4.16.1, Regulatory Framework.²² The standards focus on buildings, both public and private, that create location-specific hazards and building feature-related hazards. Location-specific hazards apply to buildings in, or within 300 feet of and having a direct line of sight to, an Urban Bird Refuge; such a Refuge includes "open spaces two acres and larger dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, or wetlands, or open water."

In addition to buildings in and near an Urban Bird Refuge, Section 139 applies similar standards to certain building features citywide, including "free-standing glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments 24 square feet and larger in size."

For building feature-related hazards involving new buildings and new additions to existing buildings, the entirety of the hazard must be made bird-safe through such treatments as fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least one-quarter of an inch wide at a minimum spacing of 4 inches, or have horizontal elements at least one-eighth of an inch wide at a maximum spacing of 2 inches, according to the Standards.

The Standards prescribe the use of a checklist to educate project sponsors and their future tenants on potential hazards and applicable treatments. They also exempt residential buildings less than 45 feet in height with limited glass facades. The Standards also recommend educational guidelines and voluntary programs.

The project site is located adjacent to John McLaren Park, which would be considered an Urban Bird Refuge. For buildings greater than 45 feet in height, the project would be required to comply with the adopted Standards for Bird-Safe Buildings.

Conclusion

The project would have a *less than significant* impact under NEPA because it would not interfere substantially with an existing wildlife corridor.

The project would have a *less than significant* impact under CEQA because it would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Mitigation: None required.

²² San Francisco Planning Department, *op. cit.*

Impact BI-5: Effects on Local Biological Resources

NEPA: The proposed project would not have a substantial adverse effect on locally-protected trees. (Less than Significant)

CEQA: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

Construction

Many large trees grow within the project site, and proposed construction of the new development would necessitate tree removal. Under the City's Urban Forestry Ordinance (Article 16 of the *Public Works Code*), trees designated as protected trees are subject to conditions before removal, including that either the tree be replaced or an in lieu fee paid to the Department of Public Works to support its Urban Forestry Program. A protected tree is a landmark, significant, or street tree. There are no landmark trees designated within the project site. There are 353 trees on the project site, of which 75 are significant trees and 134 are street trees.²³

As stated in the Project Description, the project would remove all of the trees on the project site as part of the re-grading of the site and the realignment of the street rights-of-way. Removal of the on-site trees would require a permit from the Department of Public Works under the Urban Forestry Ordinance, and the permit would include conditions that would govern the replacement planting of trees as part of the project development. *Planning Code* Section 138.1 requires one street tree for every 20 feet of street frontage. The project sponsor has prepared a preliminary landscape plan, and the sponsor has committed to meeting the requirements in *Planning Code* Section 138.1.^{24,25} The replacement species have been coordinated with the Bureau of Urban Forestry, which has jurisdiction over the street trees on the project site. The proposed project would also be required to comply with the regulations under the Department of Public Works and the Urban Forestry Ordinance.

Operation

Project operations are not expected to result in the removal of protected trees and therefore project operations would not conflict with the Urban Forestry Ordinance.

Conclusion

The impact would be ***less than significant*** under NEPA because the proposed project would not have a substantial adverse effect on locally-protected trees.

²³ Bartlett Tree Experts, *Sunnydale Tree Inventory and Assessment Plan*, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²⁴ VMWP, *A New Sunnydale Environmental Evaluation Application*, April 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²⁵ Sunnydale Development Co., LLC, personal communication with ESA, November 13, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The impact would be *less than significant* under CEQA because the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Mitigation: None required.

Impact BI-6: Effects Related to Habitat Conservation Plans

NEPA: The proposed project would not conflict with an adopted habitat conservation plan. (No Impact)

CEQA: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)

No adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan applies to the proposed project. Therefore, project construction and operations would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. SNRAMP identifies conditions and recommendations for McLaren Park. However, the park is outside of the project site and the project site is not subject to SMRAMP.

There would be *no impact* under NEPA because the proposed project would not conflict with an adopted habitat conservation plan.

There would be *no impact* under CEQA because the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation: None required.

Proposed Project Variant

The proposed project variant would have the same building footprint and configuration as the proposed project, but would have a different mix of dwelling units. Since the building footprint would be the same as the proposed project, the proposed project variant would have similar impacts to biological resources as the proposed project, under both NEPA and CEQA. Removal of trees and buildings at the project site could impact special-status birds or bats. Implementation of **Mitigation Measure M-BI-1a: Protection of Special Status Bat Species** and **Mitigation Measure M-BI-1b: Protection of Nesting Birds** would reduce impacts to special-status species to *less than significant*. These measures would require pre-construction surveys and avoidance of identified species during sensitive periods when nesting would occur. Similar to the proposed project, operations of the proposed project variant would not change from existing site conditions and would have *no impact* on special-status species.

The project site does not support riparian habitat or other sensitive communities, nor does it support wetlands; therefore the proposed project variant would have *no impact* on these resources.

As with the proposed project, the proposed project variant would be required to incorporate Standards for Bird-Safe Buildings²⁶ into building construction to ensure potential impacts related to bird strikes would be *less than significant*.

The proposed project variant would also remove trees that are designated protected by the City's Urban Forestry Ordinance. As with the proposed project, the proposed project variant would comply with the regulations under the Department of Public Works and the Urban Forestry Ordinance and thus the impact to trees would be *less than significant*.

As with the proposed project, the project variant would have *no impact* on a habitat conservation plan.

Alternative A: Reduced Development / Density Alternative

Impact A-BI-1: Effects on Special-Status Species

NEPA: The Reduced Development / Density Alternative would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)

Construction

The Reduced Development / Density Alternative could result in similar impacts to special-status species as would the proposed project. Construction of the new development would require removal of trees and abandoned buildings within the existing project boundary that could support special-status birds or bats or any breeding birds protected under Section 3503 of the *Fish and Game Code*. New trees would be planted in accordance with *Planning Code* requirements.²⁷ Mortality of special-status birds or bats as a result of such construction activities would be considered a significant impact. This would include mortality of white-tailed kite, which is a CDFW Fully Protected species observed on the project site. Additionally, tree removal resulting in impacts to active nests or mortality of migratory birds would violate the federal Migratory Bird Treaty Act and/or the *California Fish and Game Code*, Sections 3500-3516.

²⁶ San Francisco Planning Department, *op. cit.*

²⁷ Sunnydale Development Co., LLC, personal communication with ESA, November 13, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

As with the proposed project, implementation of **Mitigation Measure M-BI-1a: Protection of Special Status Bat Species** and **Mitigation Measure M-BI-1b: Protection of Nesting Birds** would ensure that the Reduced Development / Density Alternative 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 CDFW or USFWS. These measures would require pre-construction surveys and avoidance of identified species during sensitive periods when nesting would occur.

Operation

Operations of the Reduced Development / Density Alternative would not result in removal of trees or buildings that may support special-status species. Therefore, operation would be consistent with FESA [50 CFR 402] and would not adversely affect species protected by the CDFW.

Conclusion

The impact would be *less than significant with mitigation* under NEPA because the alternative would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species, but this impact would be reduced to an insubstantial level through implementation of Mitigation Measures M-BI-1a and M-BI-1b.

The impact would be *less than significant with mitigation* under CEQA because the alternative would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, but this impact would be reduced to an insubstantial level through implementation of Mitigation Measures M-BI-1a and M-BI-1b.

Mitigation Measure M-BI-1a: Protection of Special Status Bat Species.

Mitigation Measure M-BI-1b: Protection of Nesting Birds.

Impact A-BI-2: Effects on Habitat

NEPA: The Reduced Development / Density Alternative would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level). (No Impact)

CEQA: The Reduced Development / Density Alternative would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (No Impact)

The project site does not support riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. Construction and operation of the alternative would result in similar conditions to existing conditions. In addition, new infrastructure would reduce sewer backups and improve drainage. There would be no off-site impacts to wetlands.

There would be *no impact* under NEPA because the alternative would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level).

There would be *no impact* under CEQA because there is no riparian habitat or sensitive natural community on the project site.

Mitigation: None required.

Impact A-BI-3: Effects on Wetlands

NEPA: The Reduced Development / Density Alternative would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act. (No Impact)

CEQA: The Reduced Development / Density Alternative would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (No Impact)

Wetlands or waters of the United States or of the State do not occur within the project site.

The alternative would have *no impact* under NEPA because it would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act.

The alternative would have *no impact* under CEQA because the project site does not contain wetlands as defined by Section 404 of the Clean Water Act.

Mitigation: None required.

Impact A-BI-4: Effects on Wildlife Movement

NEPA: The Reduced Development / Density Alternative would not interfere substantially with an existing wildlife corridor. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The majority of the existing project site is developed and does not provide an open wildlife corridor. However, many birds utilize the project site and surrounding environs, and McLaren Park is an Urban Bird Refuge. As discussed in regards to the proposed project, these birds have potential to collide with the newly constructed buildings, which would be taller than the existing structures on the project site and could have more glass than existing buildings. Similar to the proposed project, the Reduced Development / Density Alternative would comply with the adopted Standards for Bird-Safe Buildings for buildings greater than 45 feet tall.

The alternative would have a *less than significant* impact under NEPA because it would not interfere substantially with an existing wildlife corridor.

The alternative would have a *less than significant* impact under CEQA because it would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Mitigation: None required.

Impact A-BI-5: Effects on Local Biological Resources

NEPA: The Reduced Development / Density Alternative would not have a substantial adverse effect on locally-protected trees. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

Many trees within the project site are designated as protected under the City's Urban Forestry Ordinance (Article 16 of the *Public Works Code*). Construction for the Reduced Development / Density Alternative would remove all 343 trees on the project site, including the protected trees, and replace them after construction of each phase at a minimum one-to-one ratio. Removal of these protected trees would require a permit from the Department of Public Works and tree replacement would be required as part of permit conditions, and replacement trees would be coordinated with the Bureau of Urban Forestry. The Reduced Development / Density Alternative would be required to comply with the regulations under the Department of Public Works and the Urban Forestry Ordinance, and *Planning Code*.

Operation of the reduced development/density alternation is not expected to result in the removal of protected trees and therefore operations would not conflict with the Urban Forestry Ordinance.

The impact would be *less than significant* under NEPA because the alternative would not have a substantial adverse effect on locally-protected trees.

The impact would be *less than significant* under CEQA because the alternative would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Mitigation: None required.

Impact A-BI-6: Effects Related to Habitat Conservation Plans

NEPA: The Reduced Development / Density Alternative would not conflict with an adopted habitat conservation plan. (No Impact)

CEQA: The Reduced Development / Density Alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)

Similar to the proposed project, no adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan applies to the Reduced Development / Density Alternative. Therefore, construction and operations of the Reduced Development / Density Alternative would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

There would be *no impact* under NEPA because the alternative would not conflict with an adopted habitat conservation plan.

There would be *no impact* under CEQA because the alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-BI-1: Effects on Special-Status Species

NEPA: The One-for-One Replacement Alternative would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (Less than Significant with Mitigation)

Construction

The One-for-One Replacement Alternative would include demolition of existing structures and some on-site grading for pad adjustments pursuant to American with Disabilities Act requirements. Grading would involve removal of trees, including protected trees, and

structures that may be used for roosting by special-status birds or bats. However, fewer trees would be removed under this alternative than under either the proposed project or the Reduced Development/Density Alternative. Additionally, trees and buildings in and around the project area provide suitable habitats for breeding birds. Mortality of special-status birds or bats as a result of such construction activities would be considered a significant impact. Additionally, tree removal resulting in impacts to active nests or mortality of migratory birds would violate the federal Migratory Bird Treaty Act and/or the *California Fish and Game Code*, Sections 3500-3516.

Implementation of **Mitigation Measure M-BI-1a: Protection of Special Status Bat Species** and **Mitigation Measure M-BI-1b: Protection of Nesting Birds** would ensure that the One-for-One Replacement Alternative 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 CDFW or USFWS. These measures would require pre-construction surveys and avoidance of identified species during sensitive periods when nesting would occur.

Operation

Operations of the One-for-One Replacement Alternative would not result in removal of trees or buildings that may support special-status species. Therefore, operation would be consistent with FESA [50 CFR 402] and would not adversely affect species protected by the CDFW.

Conclusion

The impact would be *less than significant with mitigation* under NEPA because the alternative would have a substantial adverse effect on special-status species (identified at the federal, state or local level) or other legally protected species, but this impact would be reduced to an insubstantial level through implementation of Mitigation Measures M-BI-1a and M-BI-1b.

The impact would be *less than significant with mitigation* under CEQA because the alternative would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, but this impact would be reduced to an insubstantial level through implementation of Mitigation Measures M-BI-1a and M-BI-1b.

Mitigation Measure M-BI-1a: Protection of Special Status Bat Species.

Mitigation Measure M-BI-1b: Protection of Nesting Birds.

Impact B-BI-2: Effects on Habitat

NEPA: The One-for-One Replacement Alternative would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level). (No Impact)

CEQA: The One-for-One Replacement Alternative would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (No Impact)

The project site does not support riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS. The alternative would result in similar operations to existing conditions. Improved site infrastructure would reduce sewer backups. There would be no off-site impacts to wetlands.

There would be *no impact* under NEPA because the alternative would not have a substantial adverse effect on sensitive or critical habitat (identified at the federal, state or local level).

There would be *no impact* under CEQA because there is no riparian habitat or sensitive community on the project site.

Mitigation: None required.

Impact B-BI-3: Effects on Wetlands

NEPA: The One-for-One Replacement Alternative would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act. (No Impact)

CEQA: The One-for-One Replacement Alternative would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (No Impact)

Wetlands or waters of the United States or of the State do not occur within the project site.

The alternative would have *no impact* under NEPA because it would not have a substantial adverse effect on wetlands or other waters of the U.S. subject to jurisdiction under Section 404 of the Clean Water Act.

The alternative would have *no impact* under CEQA because on the project site does not contain federally protected wetlands.

Mitigation: None available.

Impact B-BI-4: Effects on Wildlife Movement

NEPA: The One-for-One Replacement Alternative would not interfere substantially with an existing wildlife corridor. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The majority of the existing project site is developed and does not provide an open wildlife corridor. However, many birds utilize the project site and surrounding environs and, as discussed in regards to the proposed project, have potential to collide with the newly constructed buildings, even if those buildings would be smaller than those constructed under the proposed project. Construction, which would involve demolition and construction activities, would not interfere with a wildlife corridor or native resident or wildlife corridors. Similar to the proposed project, the One-for-One Replacement Alternative would comply with the adopted Standards for Bird-Safe Buildings.²⁸ The project site is currently developed and generally does not provide an open corridor for migratory wildlife. Operation of the One-for-One Replacement Alternative would be similar to existing site condition. The alternative would be required to comply with the adopted Bird-Safe Building guidelines.

The alternative would have a *less than significant* impact under NEPA because it would not interfere substantially with an existing wildlife corridor.

The alternative would have a *less than significant* impact under CEQA because it would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Mitigation: None required.

Impact B-BI-5: Effects on Local Biological Resources

NEPA: The One-for-One Replacement Alternative would not have a substantial adverse effect on locally-protected trees. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant)

Many trees within the project site are designated as protected under the City's Urban Forestry Ordinance (Article 16 of the *Public Works Code*). Construction for the One-for-One Replacement Alternative would remove protected trees within the project site, although it is anticipated that

²⁸ *Ibid.*

fewer trees would be removed than under the proposed project because building pads would be located in approximately the same locations as under existing conditions. Removal of protected trees would require a permit from the Department of Public Works and tree replacement would be required as part of permit conditions. The One-for-One Replacement Alternative would be required to comply with the regulations under the Department of Public Works and the Urban Forestry Ordinance, and replacement trees would be coordinated with the Bureau of Urban Forestry.

Operation of the One-for-One Replacement Alternative is not expected to result in the removal of protected trees and therefore operations would not conflict with the Urban Forestry Ordinance.

The impact would be *less than significant* under NEPA because the alternative would not have a substantial adverse effect on locally-protected trees.

The impact would be *less than significant* under CEQA because the alternative would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Mitigation: None required.

Impact B-BI-6: Effects Related to Habitat Conservation Plans

NEPA: The One-for-One Replacement Alternative would not conflict with an adopted habitat conservation plan. (No Impact)

CEQA: The One-for-One Replacement Alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)

Similar to the proposed project, no adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan applies to the One-for-One Replacement Alternative. Therefore, construction and operations of the One-for-One Replacement Alternative would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

There would be *no impact* under NEPA because the alternative would not conflict with an adopted habitat conservation plan.

There would be *no impact* under CEQA because the alternative would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, there would be no construction or removal of any structures or trees that could potentially impact special-status species, migratory birds, or protected trees. Therefore, the No Action Alternative would have *no impact* on special-status species, migratory birds, or protected trees, under NEPA or CEQA. Additionally, since there are no riparian habitats, sensitive natural communities, or wetlands on-site, the no action alternative would have *no impact* on these resources under NEPA or CEQA.

4.16.3 Cumulative Impacts

Impact CC-BI: Cumulative Effects on Biological Resources

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The geographic context for cumulative biological resources effects is the San Francisco Bay Area.

The project site is a nearly fully developed urban district with no remaining natural communities, wetlands, riparian areas, or other sensitive habitat. The project site is located adjacent to McLaren Park, which is an open space that provides habitat for a variety of wildlife species; however the proposed project would not result in impacts to biological resources within the park. Past projects, including the development of residences and commercial areas, already caused substantial adverse cumulative effects on biological resources in the project area. For example the existing residences and surrounding neighborhoods do not support natural communities and wildlife diversity is reduced compared to that found in areas with natural vegetation and less human activity.

The proposed project would have no impact to wetlands, riparian areas or sensitive natural communities, would have less than significant impacts to wildlife migratory corridors and local ordinances, and would have less than significant impacts with mitigation to special-status species. Implementation of the proposed project, and associated mitigation, combined with past, present, and reasonably foreseeable projects, would not be considered to have a significant contribution to cumulative impacts on biological resources in the project site. When considered relative to the existing cumulative impact on biological resources caused by past development, the proposed project would add only a minor, incremental contribution. The site would continue to be an urbanized development adjacent to a large park with biological resources. Operation of

the project would intensify compared to existing conditions, but that intensification would not substantially adversely affect biological resources. The proposed project's contribution would not be cumulatively considerable.

Therefore the impact would be *less than significant* under NEPA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts.

The impact would be *less than significant* under CEQA because the proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse biological resource impacts.

Its variant and alternatives would similarly result in a less than significant contribution to cumulative impacts related to biological resources for the same reasons outlined above.

4.16.4 Mitigation Measures

Mitigation Measure M-BI-1a: Protection of Special Status Bat Species:

The project sponsor shall implement the following measures:

- Prior to construction or demolition activities within 250 feet of trees/structures with at least a moderate potential to support special-status bats, a qualified biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle and collect bats) shall survey for bats. If no evidence of bats (i.e., visual or acoustic detection, guano, staining, strong odors) is present, no further mitigation is required.
- If special-status bats raising pups (also called a maternity colony) are identified within 250 feet of the project area during preconstruction surveys or project construction (typically, maternity colonies are active April 15th through August 15th), the project sponsor shall create a no-disturbance buffer acceptable in size to CDFW around the bat roosts. Bat roosts initiated within 250 feet of the project area after construction has already begun are presumed to be unaffected by project-related disturbance, and no buffer would be necessary. However, the "take" of individuals (e.g., direct mortality of individuals, or destruction of roosts while bats are present) is prohibited.
- Trees or buildings with evidence of special-status bat activity shall be removed during the time that is least likely to affect bats as determined by a qualified bat biologist (in general, roosts should not be removed if maternity bat roosts are present, typically April 15th through August 15th, and roosts should not be removed if present bats are in torpor, typically when temperatures are less than 40 degrees Fahrenheit). Non-maternity bat roosts shall be removed by a qualified biologist, by either making the roost unsuitable for bats by opening the roost area to allow airflow through the cavity, or excluding the bats using one-way doors, funnels, or flaps.
- All special-status bat roosts that are destroyed shall be replaced at a 1:1 ratio with a roost suitable for the displaced species. The type of created roosting habitat would be reflective of the habitat preference of the displaced species and would be determined by the bat biologist. An example would be bat boxes for colonial roosters. The roost shall be modified as necessary to provide a suitable roosting environment for the target bat species.

Mitigation Measure M-BI-1b: Protection of Nesting Birds:

The project sponsor shall implement the following:

- Preconstruction bird surveys shall be conducted by a qualified biologist during the breeding season (breeding season is defined as February 1st through August 15th) if tree removal or building demolition is scheduled to take place during the breeding season.
- For raptors, a preconstruction survey for nests and nesting birds shall be conducted within 2 weeks prior to initiation of construction activities if work shall occur during the breeding season. A qualified biologist shall survey all potential nesting sites in the construction limits and within 300 feet and in line of sight of the construction limits. If active nests are located, work shall not occur within 300 feet of the nest until an appropriate buffer zone has been established in coordination with the appropriate agencies (i.e., USFWS and/or CDFW).
- For other nesting birds protected by the Migratory Bird Treaty Act, a pre-construction survey for active nests shall be conducted by a qualified biologist no more than 2 weeks before construction if work shall occur during the breeding season. The survey shall be conducted within 100 feet of the work areas. If construction would affect the nest, then work shall not occur within 100 feet of the nest until a qualified biologist, in coordination with the appropriate agencies, has established an appropriate buffer zone.
- Special-status birds that establish nests during the construction period are considered habituated to such activity and no buffer shall be required, except as needed to avoid direct destruction of the nest, which would still be prohibited.
- Outside of the breeding season (August 16th through January 31st), or after young birds have fledged, as determined by the biologist, work activities may proceed.

4.17 Geology and Soils

4.17.1 Regulatory Framework

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was substantially amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements, such as emergency evacuation responsibilities, and seismic code standards, such as those to which the proposed project would be required to adhere.

State

California Building Code

The *California Building Code* (CBC) has been codified in the *California Code of Regulations* (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. Like many communities, San Francisco enforces its own *San Francisco Building Code*, which is a locally adopted version of the CBC, with amendments relevant to local conditions (see discussion below).

The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2010 CBC is based on the 2009 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations, such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction (AISC), and the American Concrete Institute (ACI). ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as

well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The CBC is normally updated every three years; the 2013 CBC took effect in January 2014.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients that are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at a site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 16, Section 1613 provides earthquake loading specifications for every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, which shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-05.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1805), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Categories D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.¹

CCR Title 24 also includes the *California Residential Code* and the *California Green Building Standards Code*, which have been adopted as separate documents (CCR Title 24, Part 2.5 and 11, respectively).² The *California Residential Code* includes structural design standards for residential one- and two-family dwellings and covers all structural requirements for conventional construction. This part incorporates by adoption the 2009 *International Residential Code* of the *International Code Council* with necessary California amendments for seismic design. All other structures, including multi-family residential projects, are found in the other parts of the CBC as discussed above.

¹ Peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one "g" of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

² Energy-related provisions of the 2013 *California Green Building Standards Code* took effect in July 2014.

Regional and Local

San Francisco Building Code

The 2013 *San Francisco Building Code*, adopted by the Board of Supervisors and effective as of July 1, 2014, incorporates the CBC, with modification by local amendments. Compliance with the *San Francisco Building Code* is mandatory for development in San Francisco;³ compliance is enforced by the San Francisco Department of Building Inspection (DBI). Throughout the permitting, design, and construction phases of a building project, DBI engineers and building inspectors confirm that the requirements are being implemented by project architects, engineers, and contractors. During the design phase for a proposed new or remodeled structure, foundation support and structural specifications based on the preliminary foundation investigations would be prepared by the project engineer and architect and would be reviewed for compliance with the *San Francisco Building Code* by DBI. During the construction phase, DBI inspectors would be responsible for enforcing the provisions of the *Building Code* as implemented by the contractor.

4.17.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

These thresholds encompass the factors taken into account under NEPA to determine the significance of an action in terms of the context and intensity of its effects. For geology and soils, the analysis considers whether the proposed project or alternatives would:

- Result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking;
- Result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils;
- Destabilize existing geologic conditions or accelerate adverse geologic processes;
- Expose people or structures to substantial threat of injury or damage from slope failure; or
- Cause substantial soil erosion.

Significance Criteria under CEQA

For geology and soils, the analysis considers whether the proposed project or alternatives would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on

³ There are certain exceptions, such as for state and federal properties, and for hospitals and schools, which are governed by a separate set of state building regulations overseen by the California Office of Statewide Health Planning and Development and the Division of the State Architect, respectively. These exceptions do not apply to the proposed project.

- other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42.);
- ii. Strong seismic ground shaking;
- iii. Seismic-related ground failure, including liquefaction;
- iv. Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property;
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater; or
- Change substantially the topography or any unique geologic or physical features of the site.

Approach to Analysis

The impact discussion was developed by reviewing available information on local and regional geologic conditions at the site including the geotechnical investigation prepared for the project site as well as information compiled by the United States Geological Survey and California Geological Survey.

Proposed Project

Impact GE-1: Seismic Effects

NEPA: The proposed project would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils. (Less than Significant)

CEQA: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic ground-shaking, liquefaction, or lateral spreading. (Less than Significant)

The project site is not located within, or immediately adjacent to, an Alquist-Priolo Special Studies Zone.⁴ While fault rupture is not necessarily limited to the boundaries of the Alquist-

⁴ California Geological Survey (CGS; formerly California Division of Mines and Geology) *Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of May 1, 1998*, [<http://www.consrv.ca.gov>], November 16, 1998, and CGS, *Fault Rupture Hazard Zones in California* Alquist Priolo Earthquake Zoning Act, Special Publication 42, Revised 1997.

Priolo fault hazard zones, the likelihood of ground rupture at the project site would be considered very low. The closest active faults are the San Andreas Fault, located approximately 8 miles southwest of the project site, and the Hayward Fault, about 12 miles northeast of the project site.

The Association of Bay Area Governments compiles maps that show areas of the city subject to geologic hazards. The project site is located in an area subject to “very strong” groundshaking (Modified Mercalli Intensity VIII) from a combined composite shaking hazard based on all earthquake scenarios.⁵ The *San Francisco General Plan* Community Safety Element also includes maps indicating areas of the city subject to liquefaction and landslides. According to Map 4 of the Community Safety Element (Areas of Liquefaction Potential), the project site is primarily located outside of the areas considered to have liquefaction potential.⁶ However, a small area of the southeast portion of the project site is mapped as potentially liquefiable. The geotechnical investigation for the project site, based on analysis of site soils, concluded that the potential for liquefaction at the site is low.⁷ Map 5 of the Community Safety Element (Areas Susceptible to Landslides) shows the project site as being within an identified area that is susceptible to landslides.⁸ The geotechnical investigation for the proposed project concluded that some portions of the west end of the site are located in a Seismically Induced Landslide Hazard Zone, however standard geotechnical approaches to grading would effectively address this hazard.⁹

Without appropriate geotechnical soil and foundation site preparations--such as use of engineered fill, compacted foundation soils, retaining walls, and appropriately designed foundation systems--new structures in the project site could be substantially damaged during a significant seismic event. However, all proposed structures, including related improvements such as roads and utilities, would be required to adhere to the *San Francisco Building Code*. The geotechnical investigation for the project recommended that the upper 1 to 5 feet of loose soils found on the project site be removed, moisture conditioned, and recompacted (for reuse of site soils or compaction of imported fills) in accordance with geotechnical engineering oversight. In addition, the geotechnical investigation identified a range of appropriate stiff rigid foundation types that would be appropriate for the site setting including mat foundations, slab foundations, spread footings, and drilled piers. These foundation systems would also be designed to minimize any potential settlement from static or dynamic (earthquake) forces. Because the site would undergo substantial

⁵ Continued research has resulted in revisions to ABAG’s earthquake hazard maps. Available on ABAG website (viewed July 14, 2010) at: <http://www.abag.ca.gov/bayarea/eqmaps/mapsba.html>. The original 1995 ABAG maps, published in *On Shaky Ground* and included in the *General Plan* Community Safety Element, identified the potential for “extreme damage” in the project area. ABAG notes on its website, “The damage, however, will not be uniform. Some buildings will experience substantially more damage than this overall level, and others will experience substantially less damage.” Buildings that are expected to experience greater damage are older buildings that have not received seismic strengthening improvements.

⁶ *San Francisco General Plan*, Community Safety Element, 1996 and Community Safety Element Update 2007.

⁷ It should also be noted that the site soils were not found to contain serpentinite which is also discussed below in the Hazardous Materials section. Engeo Incorporated, Geotechnical Report – Sunnydale – Velasco Redevelopment, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ *San Francisco General Plan*, Community Safety Element, 1996 and Community Safety Element Update 2007.

⁹ Engeo Incorporated, Geotechnical Report – Sunnydale – Velasco Redevelopment, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

grading to reconfigure site topography as part of the project, as described in Chapter II, Project Alternatives/Description, the shallow layer of soil would be removed over much of the site and the finished grade would be properly compacted in accordance with the recommendations of the geotechnical engineer. At other locations, new soil would be added, and this, too, would be properly compacted in accordance with geotechnical engineering recommendations. Where existing grades are not substantially altered, recompaction of existing soil may be required, as recommended in the geotechnical report.

All final building plans would be reviewed by the DBI prior to issuance of a grading permit. Potential geologic hazards, including groundshaking and slope stability, would be ameliorated during the DBI permit review process. In reviewing building plans, DBI refers to a variety of information sources to determine existing hazards and assess requirements for mitigation. Sources reviewed include maps of Special Geologic Study Areas and known landslide areas in San Francisco, as well as the building inspectors' working knowledge of areas of special geologic concern. For any development proposal in an area of liquefaction potential, DBI will, in its review of the building permit application, require the project sponsor to prepare a final geotechnical report that assesses the nature and severity of the hazard(s) on the site and recommend site-specific project design and construction features that would reduce the hazard(s).

To ensure compliance with all *San Francisco Building Code* provisions regarding structural safety, when DBI reviews the geotechnical report and building plans for the proposed project, it will determine necessary engineering and design features for the project to reduce potential damage to structures from groundshaking and landslides. Therefore, the potential damage to structures from geologic hazards on the project site would be ameliorated through the DBI requirement for a geotechnical report and review of the building permit application. Any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process would constitute minor modifications of the project and would not require additional environmental analysis.

The incorporation of current building code standards and seismic requirements would ensure that the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.

The impact would be *less than significant* under NEPA because the proposed project would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils.

The impact would be *less than significant* under CEQA because the proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic ground-shaking, liquefaction, or lateral spreading.

Mitigation: None required.

Impact GE-2: Effects from Slope Failure or Landslides

NEPA: The proposed project would not expose people or structures to substantial threat of injury or damage from slope failure. (Less than Significant)

CEQA: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (Less than Significant)

According to Map 5 of the Community Safety Element showing areas susceptible to landslides, the project site appears to lie within the boundaries of areas identified as susceptible to landslides. However, as shown on the official State of California Seismic Hazards Zone Map for San Francisco prepared under the Seismic Hazards Mapping Act of 1990,¹⁰ the majority of the project site does not lie within a seismic hazard zone for landslides. Only a small portion of the western end of the site lies within the state identified hazard zone.¹¹ The geotechnical investigation for the site identified the potential for the landslide hazard and provided a range of appropriate slope guidelines for the final grading which include final slopes of no greater than 2:1 (horizontal to vertical). Cut slopes can be safely accomplished at steeper gradients but not without additional geotechnical engineering applications. As discussed above, the DBI permit review process includes a review of a variety of sources to determine existing hazards and assess requirements for engineering technologies. Sources would include known landslide areas in San Francisco as well as the building inspectors' working knowledge of areas of special geologic concern. Therefore, the potential damage to structures from landslides on the project site would be ameliorated through the DBI requirement for a geotechnical report and review of the building permit application. Any changes incorporated into site requirements--such as grading or construction of retaining walls required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process--would constitute minor modifications of the project and would not require additional environmental analysis.

The impact would therefore be *less than significant* under NEPA because the proposed project would not expose people or structures to substantial threat of injury or damage from slope failure.

The impact would be *less than significant* under CEQA because the proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Mitigation: None required.

¹⁰ The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones.

¹¹ Engeo Incorporated, 2009, op cit.

Impact GE-3: Erosion Effects

NEPA: The proposed project would not cause substantial soil erosion. (Less than Significant)

CEQA: The proposed project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

The project site is currently graded and developed with open vegetated areas between structures. Loose surface soils would generally be removed and reused on site as engineered fill. Some areas would receive more grading and earthwork activities than others with a maximum depth of 45 feet of excavation in isolated areas. Open space areas may require minor grading, and topsoils would be segregated and returned to their point of origin, where possible. Disturbance of site soils would be temporary during construction, and the project sponsor would be required to adhere to the requirements of the General Construction Permit under the National Pollutant Discharge Elimination System (NPDES) program. The NPDES permit requires implementation of a Stormwater Pollution Prevention Plan, which contains best management practices that are designed to reduce potential erosion impacts during construction.

Once constructed, the proposed project would be required to construct all improvements according to the San Francisco Stormwater Management Ordinance, which requires a stormwater management system that would collect, detain and potentially retain some stormwater within the project site in a manner such that the potential for erosion and loss of topsoil is minimized (see further discussion of drainage requirements in Section 4.18, Hydrology and Water Quality). The proposed project would include vegetating exposed cut slopes as well as drainage control requirements during operation that would control stormwater runoff at the site. Thus, the project would not result in a loss of topsoil, nor result in substantial soil erosion on the project site or surrounding properties.

There would be a *less-than-significant* impact under NEPA because the proposed project would not cause substantial soil erosion.

There would be a *less-than-significant* impact under CEQA because the proposed project would not result in substantial soil erosion or the loss of topsoil.

Mitigation: None required.

Impact GE-4: Effects on Unstable Geologic Units

NEPA: The proposed project would not destabilize existing geologic conditions or accelerate adverse geologic processes. (Less than Significant)

CEQA: The proposed project would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)

As mentioned above, all proposed structures, including related improvements such as roads and utilities, would be required to adhere to the *San Francisco Building Code*. As is required for

geotechnical investigations, the potential hazards of unstable geologic units or soils, including a site's susceptibility to on- or off-site landslide (also addressed above), lateral spreading (addressed above), subsidence, liquefaction (addressed above), or collapse is identified and addressed through widely accepted site preparation and foundation design measures. For example, the geotechnical investigation for the project recommended that the upper 1 to 5 feet of loose soils found on the project site should be removed, moisture conditioned, and recompacted (for reuse of site soils or compaction of imported fills) in accordance with geotechnical engineering oversight in order to prevent any damage that might otherwise occur from subsidence. In addition, the geotechnical investigation identified a range of appropriate stiff rigid foundation types that would be designed to minimize any potential settlement from the proposed new structures.

All final building plans would be reviewed by the Department of Building Inspection (DBI) prior to issuance of a grading permit. As discussed above, potential geologic hazards, including subsidence and collapse, would be ameliorated during DBI permit review process. In reviewing building plans, DBI refers to a variety of information sources to determine existing hazards and assess requirements for mitigation. For any development proposal with identified stability hazards, DBI will, in its review of the building permit application, require the project sponsor to prepare a final geotechnical report that assesses the nature and severity of the hazard(s) on the site and recommends site-specific project design and construction features that would reduce the hazard(s). Therefore, the potential damage to structures from geologic hazards on a project site would be ameliorated through DBI requirement for a geotechnical report and review of the building permit application. Any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process would constitute minor modifications of the project and would not require additional environmental analysis.

The impact would therefore be *less than significant* under NEPA because the proposed project would not destabilize existing geologic conditions or accelerate adverse geologic processes.

The impact would be *less than significant* under CEQA because the proposed project would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Mitigation: None required.

Impact GE-5: Effects from Expansive Soils

NEPA: This topic is not separately covered under NEPA.

CEQA: The proposed project would not be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property. (Less than Significant)

Typically, soils that exhibit expansive characteristics are found within the upper 5 feet of ground surface. Over long-term exposure to wetting and drying cycles, expansive soils can experience volumetric changes. The effects of expansive soils could damage foundations of above-ground

structures, paved roads and streets, and concrete slabs. Expansion and contraction of soils, depending on the season and the amount of surface water infiltration, could exert enough pressure on structures to result in cracking, settlement, and uplift. However, as discussed above, the geotechnical investigation for the project site recommends removing the upper 1 to 5 feet of surface soils and replacing with engineered fill materials. The site soils were determined to have a low to moderate potential for expansion. The final geotechnical investigation would also address the potential for expansive soils and minimize any adverse effects through site preparation methods such as placement of engineered fill in accordance with the *San Francisco Building Code* and DBI review.

Incorporation of these building code requirements would reduce the potential impact to *less than significant* under CEQA because once site preparations are completed according to the final recommendations of the geotechnical report and building code requirements, the proposed project would not be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property.

Mitigation: None required.

Impact GE-6: Effects on Septic Tanks

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (No Impact)

The proposed project would not include any septic tanks or alternative wastewater disposal systems and therefore there would be no impact for this criterion.

There would be *no impact* under CEQA.

Mitigation: None required.

Impact GE-7: Effects on Topography

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not change substantially the topography or any unique geologic or physical features of the site. (Less than Significant)

The project site is characterized by relatively steep natural topography that varies from 75 to 250 feet above mean sea level. The project site is currently developed with various residential housing units. The proposed project would redevelop the site, which would involve site grading. However, the overall existing topography of the project site—sloping downward from a highpoint in the southwest toward the valley in the east, would not be substantially altered.

There would be a *less-than-significant* impact under CEQA with respect to topographical features of the site.

Mitigation: None required.

Proposed Project Variant

The proposed project variant would be subject to the same geologic conditions as the proposed project and would similarly be required to adhere to the *San Francisco Building Code*, as well as DBI review. While some design specifics would change under the proposed project variant, the same building footprints would be developed, although at slightly less density, which could require different design details to withstand a seismic event. However, the same design standards and requirements would apply. Adherence to these design standards and code requirements would result in construction of buildings that would withstand hazards present, such as seismic groundshaking, liquefaction, subsidence, landslide potential, expansive soils, and differential settlement. Impacts would be *less than significant* under NEPA and *less than significant* under CEQA.

Alternative A: Reduced Development / Density Alternative

Impact A-GE-1: Seismic Effects

NEPA: The Reduced Development / Density Alternative would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading. (Less than Significant)

Alternative A would include construction of the same building footprints as those under the proposed project, but at an overall lower density, which could result in lighter buildings that would require slightly different design to withstand a seismic event. As is the case for the proposed project, Alternative A is not likely to be susceptible to fault rupture hazards based on the location and distance to the nearest active fault trace. The incorporation of current building code standards and seismic requirements, as described above for the proposed project, would ensure that the Reduced Development/Density Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading.

The impact would be *less than significant* under NEPA because the Reduced Development / Density Alternative would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading.

Mitigation: None required.

Impact A-GE-2: Effects from Slope Failure or Landslides

NEPA: The Reduced Development / Density Alternative would not expose people or structures to substantial threat of injury or damage from slope failure. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (Less than Significant)

Only a small portion of the western end of the site lies within the state identified hazard zone.¹² The DBI permit review process includes a review of landslide hazards which would ameliorate any potential landslide hazard through the DBI requirement for a geotechnical report and review of the building permit application. Final site designs would be required to meet the *San Francisco Building Code* standards that would minimize exposure to adverse effects from landslides.

The impact would therefore be *less than significant* under NEPA because the Reduced Development / Density Alternative would not expose people or structures to substantial threat of injury or damage from slope failure.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Mitigation: None required.

¹² Engeo Incorporated, Geotechnical Report – Sunnydale – Velasco Redevelopment, April 13, 2009.

Impact A-GE-3: Erosion Effects

NEPA: The Reduced Development / Density Alternative would not cause substantial soil erosion. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

The project site is currently graded and developed with open vegetated areas between structures. During construction, loose surface soils would generally be removed and reused on site as engineered fill. Similar to the proposed project, the Reduced Development/Density Alternative would result in temporary disturbance of site soils during construction, and the project sponsor would be required to adhere to the requirements of the General Construction Permit under the NPDES program. The NPDES permit requires implementation of a Stormwater Pollution Prevention Plan, which contains best management practices that are designed to reduce potential erosion impacts. Thus, the Reduced Development/Density Alternative would not result in a loss of topsoil, nor result in substantial soil erosion on the project site or surrounding properties.

Under operations, the Reduced Development/Density Alternative would similarly be required to construct all improvements according to the San Francisco Stormwater Management Ordinance, which requires a stormwater management system that would collect, detain and potentially retain some stormwater within the project site in a manner such that the potential for erosion and loss of topsoil is minimized (See further discussion of drainage requirements in Section 4.18, Hydrology and Water Quality).

The would be a *less than significant* impact under NEPA because the Reduced Development / Density Alternative would not cause substantial soil erosion.

There would be a *less than significant* impact under CEQA because the Reduced Development / Density Alternative would not result in substantial soil erosion or the loss of topsoil.

Mitigation: None required.

Impact A-GE-4: Effects on Unstable Geologic Units

NEPA: The Reduced Development / Density Alternative would not destabilize existing geologic conditions or accelerate adverse geologic processes. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)

As mentioned above for the proposed project, all proposed structures—including related improvements such as roads and utilities—would be required to adhere to the *San Francisco Building Code*. The required geotechnical investigation would evaluate the potential hazards for

unstable geologic units or soils including a site's susceptibility to on- or off-site landslide (also addressed above), lateral spreading (addressed above), subsidence, liquefaction (addressed above), or collapse through widely accepted site preparation and foundation design measures.

All final building plans would be reviewed by the DBI prior to issuance of a grading permit. The DBI requirement for a geotechnical report and review of the building permit application would ameliorate potential damage to structures caused by seismic events. Any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process would constitute minor modifications of the project and would not require additional environmental analysis.

The impact would therefore be *less than significant* under NEPA because the Reduced Development / Density Alternative would not destabilize existing geologic conditions or accelerate adverse geologic processes.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Mitigation: None required.

Impact A-GE-5: Effects from Expansive Soils

NEPA: This topic is not separately covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property. (Less than Significant)

Similar to the proposed project, the potential for adverse effects from expansive soils would be addressed by the required final design geotechnical investigation. The site was determined to contain subsurface soils with a low to moderate potential for expansive properties. However, any adverse effects would be minimized through site preparations such as placement of engineered fill in accordance with the *San Francisco Building Code* and DBI review.

The impact would be *less than significant* under CEQA because, once site preparations are completed according to the final recommendations of the geotechnical report and building code requirements, the Reduced Development / Density Alternative would not be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property.

Mitigation: None required.

Impact A-GE-6: Effects on Septic Tanks

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (No Impact)

The Reduced Development/Density Alternative would not include any septic tanks or alternative wastewater disposal systems, and there would be *no impact* under CEQA for this criterion.

Mitigation: None required.

Impact A-GE-7: Effects on Topography

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not change substantially the topography or any unique geologic or physical features of the site. (Less than Significant)

The project site is characterized by relatively steep natural topography that varies from 75 to 250 feet above mean sea level. The project site is currently developed with various residential housing units. The Reduced Development/Density Alternative would redevelop the site, including substantial site grading to improve accessibility. This grading would remove the upper surface soils and replace them with engineered fill materials, and it would result in the removal of soils. However, it would not substantially alter the existing topographic characteristic of the project site, sloping from southwest to east.

There would be a *less than significant* impact under CEQA with respect to topographical features of the site.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-GE-1: Seismic Effects

NEPA: The One-for-One Replacement Alternative would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading. (Less than Significant).

As is the case for the proposed project, the One-for-One Replacement Alternative is not likely to be susceptible to fault rupture hazards based on the location and distance to the nearest active fault trace. The incorporation of current building code standards and seismic requirements--as described above for the proposed project--would ensure that the One-for-One Replacement Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading.

The impact would be *less than significant* under NEPA because the One-for-One Replacement Alternative would not result in substantial risk of injury or death due to collapse of structures or damage to infrastructure because of ground failure or groundshaking, nor would it result in substantial damage to foundations or other infrastructure due to liquefaction, differential settlement, lateral spreading, expansive soils, corrosive soils, or other adverse engineering properties of soils.

The impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, expansive soils, seismic ground-shaking, liquefaction, or lateral spreading.

Mitigation: None required.

Impact B-GE-2: Effects from Slope Failure or Landslides

NEPA: The One-for-One Replacement Alternative would not expose people or structures to substantial threat of injury or damage from slope failure. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. (Less than Significant)

The DBI permit review process includes a review of landslide hazards which, if identified, would be ameliorated through the DBI requirement for a geotechnical report and review of the building permit application. Final site designs would be required to meet the *San Francisco Building Code* standards that would minimize exposure to adverse effects from landslides.

The impact would be *less than significant* under NEPA because the One-for-One Replacement Alternative would not expose people or structures to substantial threat of injury or damage from slope failure.

The impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

Mitigation: None required.

Impact B-GE-3: Erosion Effects

NEPA: The One-for-One Replacement Alternative would not cause substantial soil erosion. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)

The project site is currently graded and developed with open vegetated areas between structures. Under construction, loose surface soils would generally be removed and reused on site as engineered fill. Grading and excavation, however, would be less substantial than under the proposed project or the Reduced Development/Density Alternative because building pads would generally be in the same locations as under existing conditions. Similar to the proposed project, the One-for-One Replacement Alternative would result in temporary disturbance of site soils during construction, and the project sponsor would still be required to adhere to the requirements of the General Construction Permit under the NPDES program. The NPDES permit requires implementation of a Stormwater Pollution Prevention Plan, which contains best management practices that are designed to reduce potential erosion impacts. Thus, the One-for-One Replacement Alternative would not result in a loss of topsoil, nor result in substantial soil erosion on the project site or surrounding properties.

The One-for-One Replacement Alternative would similarly be required to construct all improvements according to the San Francisco Stormwater Management Ordinance, which requires a stormwater management system that would collect, detain and potentially retain some stormwater within the project site in a manner such that the potential for erosion and loss of topsoil is minimized (See further discussion of drainage requirements in Section 4.18, Hydrology and Water Quality).

There would be a *less-than-significant* impact under NEPA because the One-for-One Replacement Alternative would not cause substantial soil erosion.

There would be a *less-than-significant* impact under CEQA because the One-for-One Replacement Alternative would not result in substantial soil erosion or the loss of topsoil.

Mitigation: None required.

Impact B-GE-4: Effects on Unstable Geologic Units

NEPA: The One-for-One Replacement Alternative would not destabilize existing geologic conditions or accelerate adverse geologic processes. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)

As mentioned above for the proposed project, all proposed structures in the One-for-One Replacement, including related improvements such as roads and utilities, would be required to

adhere to the *San Francisco Building Code*. The required geotechnical investigation would evaluate the potential hazards for unstable geologic units or soils including a site's susceptibility to on- or off-site landslide (also addressed above), lateral spreading (addressed above), subsidence, liquefaction (addressed above), or collapse through widely accepted site preparation and foundation design measures.

All final building plans would be reviewed by the Department of Building Inspection (DBI) prior to issuance of a grading permit. Any changes incorporated into the foundation design required to meet the *San Francisco Building Code* standards that are identified as a result of the DBI permit review process would constitute minor modifications of the project and would not require additional environmental analysis.

The impact would be *less than significant* under NEPA because the One-for-One Replacement Alternative would not destabilize existing geologic conditions or accelerate adverse geologic processes.

The impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Mitigation: None required.

Impact B-GE-5: Effects from Expansive Soils

NEPA: This topic is not separately covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not be located on expansive soil, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property. (Less than Significant)

Similar to the proposed project, the potential for adverse effects from expansive soils would be addressed by the required final design geotechnical investigation. The project site was determined to contain soils having a low to moderate potential for expansive properties. However, any adverse effects would be minimized through site preparations such as placement of engineered fill in accordance with the *San Francisco Building Code* and DBI review.

Incorporation of these building code requirements would reduce the potential impact to *less than significant* under CEQA because the One-for-One Replacement Alternative would not be located on expansive soil once site preparations are completed, as defined in Chapter 18 of the *California Building Code*, creating substantial risks to life or property.

Mitigation: None required.

Impact B-GE-6: Effects on Septic Tanks

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (No Impact)

The One-for-One Replacement Alternative would not include any septic tanks or alternative wastewater disposal systems and therefore there would be *no impact* for this criterion under CEQA.

Mitigation: None required.

Impact B-GE-7: Effects on Topography

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not change substantially the topography or any unique geologic or physical features of the site. (Less than Significant)

The project site is characterized by relatively steep natural topography that varies from 75 to 250 feet above mean sea level. The project site is currently developed with various residential housing units. The One-for-One Replacement Alternative would redevelop the site, which would include some grading, but to a lesser extent than both the proposed project and the Reduced Development / Density Alternative would include.

The One-for-One Replacement Alternative would not substantially alter the existing topography and therefore there would have a *less than significant* impact under CEQA with respect to topographical features of the site.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, the existing structures would remain, which may expose current occupants to future seismic risk. In general, older structures were constructed in accordance with less stringent seismic requirements. Without a detailed evaluation of the current structural integrity by a structural engineer there is no way of determining with certainty whether there are any imminent threats of damage or injury to existing structures and occupants. The No Action Alternative would not benefit from modern construction methods and current seismic design criteria that would be applied to new construction that would be required under the alternatives proposed but the No Action Alternative would not result in any substantive changes to seismic risk that is not already present and therefore there would be *less than significant* impacts.

4.17.3 Cumulative Impacts

Impact CC-GE: Cumulative Geology and Soils Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to geology or soils. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse geologic impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The geographic context for cumulative geologic effects is the entire San Francisco Bay Area region that is among the most seismically active areas of California.

The proposed project would result in a less-than-significant impact related to fault rupture and changes in topography and would have a less-than-significant impact related to groundshaking, liquefaction, landslides, erosion, and expansive soils. Other development and redevelopment in the area would be required to implement similar geotechnical engineering measures in accordance with the most recent version of the *San Francisco Building Code*. The proposed project, combined with other foreseeable development in the area, would be expected to result in increased population and development in an area susceptible to seismic risks and hazards. While the number of people visiting, living and working in the area would increase incrementally, exposing additional people to seismic and geologic hazards, the risk to people and property would be reduced through the upgrading or demolishing of older buildings that were constructed under less stringent building code requirements, such as the existing buildings on the project site. Any older buildings in the area to be retained and undergoing upgrades would be required to be seismically retrofitted and newer buildings would be constructed to stricter building codes in accordance with the *San Francisco Building Code*, Chapter 16, Structural Design. The foreseeable projects in the area would be required to implement design measures similar to those required by DBI and to adhere to federal, state, and local programs, requirements and policies pertaining to building safety and construction permitting.

Therefore, the proposed project, variant, and alternatives, in combination with reasonably foreseeable projects, would not have a considerable contribution of cumulative impacts related to geology, soils and seismicity and the impact would be *less than significant* under NEPA.

The proposed project, variant, and alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse geologic impact, and the impact would be *less than significant* under CEQA.

Its alternatives would similarly result in a less than significant contribution of cumulative impacts related to geology, soils, and seismicity for the same reasons as discussed above.

4.18 Hydrology and Water Quality

4.18.1 Regulatory Framework

Federal Regulations

Clean Water Act – Water Quality

In 1972, the Clean Water Act (CWA) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the U.S. Environmental Protection Agency (U.S. EPA) the authority to implement pollution control programs, such as setting wastewater standards for industries. The CWA sets water quality standards for contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, to finance municipal wastewater treatment facilities, and to manage polluted runoff. The U.S. EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and programs, in California to the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). Water quality standards applicable to the project are listed in the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), discussed further below under State Regulations.

Section 303(d) and Total Maximum Daily Loads

In accordance with Section 303(d) of the Clean Water Act, states must present the U.S. EPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards. The CWA requires the development of total maximum daily loads (TMDLs), to improve water quality of impaired water bodies. TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. Implementation of this program in the project area is conducted by the San Francisco Bay RWQCB.

Section 401

Section 401 of the CWA requires compliance with state water quality standards for actions within state waters. Compliance with the water quality standards required under Section 401 is a condition for issuance of a Section 404 permit (see below). Under Section 401 of the CWA, every applicant for a federal permit or license for any activity that may result in a discharge to a water body must obtain a State Water Quality Certification that the proposed activity will comply with state water quality standards.

Section 402

Section 402 of the CWA authorizes the U.S. EPA to establish a nationwide surface water discharge permit Program for municipal and industrial point sources known as the National Pollution Discharge Elimination System (NPDES) program. Under Section 402, the San Francisco Bay RWQCB has set standard conditions for each permittee in the Bay Area, including effluent limitation and monitoring programs.

Safe Drinking Water Act -- Sole Source Aquifers

The Safe Drinking Water Act of 1974 requires protection of drinking water systems that are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health. Development that can affect aquifers designated by the U.S. EPA must be reviewed for impact on such designated aquifer sources.

Federal Combined Sewer Overflow Control Policy

In 1994, the U.S. EPA adopted the Combined Sewer Overflow Control Policy (CSO Control Policy), which became part of the CWA in December 2000. This policy establishes a consistent national approach for controlling discharges from combined sewers—those, like San Francisco's, that collect wastewater and stormwater in a single set of pipes—to the nation's waters. Using the NPDES permit program, the permittee is required to implement the following nine minimum controls that constitute the technology-based requirements of the CWA and can reduce the frequency of CSOs and their effects on receiving water quality:

1. Conduct proper operation and regular maintenance programs for the combined sewer system and CSO outfalls;
2. Maximize the use of the collection system for storage;
3. Review and modify pretreatment programs to ensure that CSO impacts are minimized;
4. Maximize flow to the treatment plant for treatment;
5. Prohibit CSOs during dry weather;
6. Control solids and floatable materials in CSOs;
7. Develop and implement pollution prevention programs that focus on contaminant reduction activities;
8. Notify the public; and
9. Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.

The City is currently implementing these controls as required by this first phase of the CSO Control Policy. This includes development of a Water Pollution Prevention Program that focuses on minimizing pollutants entering the City's combined sewer system and addresses pollutants from residential, commercial, industrial, and nonpoint pollutant sources.

During the second phase, the permittee is required to continue implementation of the nine minimum controls, properly operate and maintain the completed CSO controls in accordance with the operational plan, and implement the post-construction monitoring program. In conformance with the CSO Control Policy, the City has developed a long-term control plan to select CSO controls to comply with water quality criteria and to protect the beneficial uses of the receiving waters. In accordance with the CSO Control Policy, this approach must meet one of these criteria:

- An average of four CSO events per year;
- Elimination or capture no less than 85 percent by volume of the combined sewage collected in the combined sewer system during precipitation events on a system-wide average basis; or

- Removal of the mass of any contaminant causing water quality impairment that would be otherwise removed by eliminating or capturing the flow as specified above.

The CSO Control Policy requires that any CSOs that occur after implementation of the nine minimum control measures should receive a minimum of primary clarification (removal of floatables and settleable solids), solids and floatable disposal, and disinfection (if necessary to meet water quality standards and protect the beneficial uses of the receiving water). The San Francisco Wastewater Control Program exceeds the specifications of the presumptive approach because 100 percent of the combined sewer flows are captured and treated rather than the required 85 percent. As defined in the CSO Control Policy, San Francisco has no remaining untreated overflow events because the overflows that occur in San Francisco currently receive the equivalent of primary treatment within the storage/transport boxes, consisting of removal of floatables and settleable solids.

The City is currently in full compliance with the CSO Control Policy. In 1997, the City completed construction of a 20-year, \$1.6 billion Wastewater Master Plan that included extensive storage, transport and treatment upgrades to the combined sewer system that met approved design criteria for overall protection of beneficial uses. Operation and implementation of these facilities satisfies the CSO Control Policy, including maximizing the use of the system during wet weather. The City is currently in the first phase of the Sewer System Improvement Program, another multi-year program to upgrade its wastewater facilities.

Executive Order 11988 and National Flood Insurance Program

Under Executive Order 11988, the Federal Emergency Management Agency (FEMA) is responsible for management of floodplain areas defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 1 percent or greater chance of flooding in any given year. Also, FEMA administers the National Flood Insurance Program, which requires that local governments covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the one percent annual chance flood zone. FEMA prepares Flood Insurance Rate Maps (FIRMs) that are used to identify areas prone to flooding.

State Regulations

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the *California Water Code*) provides for protection of the quality of all waters of the State of California for use and enjoyment by the people of California. The act also establishes provisions for a statewide program for the control of water quality, recognizing that waters of the state are increasingly influenced by interbasin water development projects and other statewide considerations, and that factors--such as precipitation, topography, population, recreation, agriculture, industry, and economic development--vary regionally within the state. The statewide program for water quality control is therefore administered most effectively on a local level with statewide oversight. Within this framework,

the act authorizes the SWRCB and regional boards to oversee the coordination and control of water quality within California.

San Francisco Bay Water Quality Control Plan (Basin Plan)

San Francisco Bay waters are under the jurisdiction of the San Francisco Bay RWQCB, which establishes regulatory standards and objectives for water quality in the Bay in the *Water Quality Control Plan for the San Francisco Bay Basin*, commonly referred to as the Basin Plan.¹ The Basin Plan identifies existing and potential beneficial uses for surface waters and provides numerical and narrative water quality objectives designed to protect those uses. The preparation and adoption of water quality control plans is required by the *California Water Code* (Section 13240) and supported by the federal CWA. Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control. Adoption or revision of surface water standards is subject to the approval of the U.S. EPA.

Total Maximum Daily Loads

As described above under Section 303(d) of the Clean Water Act (CWA), states must present the U.S. EPA with a list of “impaired water bodies,” defined as those water bodies that do not meet water quality standards. As discussed in Section 3.18, the RWQCB has listed the Central Bay portion of the San Francisco Bay as well as Crissy Field Beach, Islais Creek and Mission Creek as impaired water bodies,² and the CWA requires the development of TMDLs to improve water quality of impaired water bodies. The first step of the TMDL process is development of a TMDL report describing the water quality problem addressed, detailing the pollutant sources, and outlining the solutions. An implementation plan, included in the TMDL report, describes how and when pollution prevention, control, or restoration activities will be accomplished and who will be responsible for these actions. The final step of the TMDL process is adopting and amending the Basin Plan to legally establish the TMDL and to specify regulatory requirements for compliance. As part of a Basin Plan amendment, waste load allocations are specified for entities that have permitted discharges.

TMDLs for polychlorinated biphenyls (PCBs) and mercury in San Francisco Bay have been approved by the U.S. EPA and officially incorporated into the Basin Plan. The RWQCB also adopted the San Francisco Bay Watershed Permit (Order No. R2-2007-0077) addressing mercury discharges from municipal and industrial wastewater dischargers.³ In accordance with this

¹ San Francisco Bay Regional Water Quality Control Board (RWQCB), *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), www.swrcb.ca.gov/rwqcb2/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf, December 31, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² San Francisco Bay Regional Water Quality Control Board, 2006 CWA 303(d) *List of Water Quality Segments Requiring TMDLs*, approved by the United States Environmental Protection Agency on June 28, 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ Regional Water Quality Control Board, San Francisco Bay Region, *San Francisco Mercury Watershed Permit, Municipal and Industrial Wastewater Dischargers*, Order No. R2-2007-0077, adopted November 1, 2007. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

permit, the mercury allocation for the Southeast Water Pollution Control Plant (SEWPCP) is 2.1 kilograms per year by 2017 and 1.6 kilograms per year by 2027, reduced from an estimated annual load of 2.7 kilograms per year in 2003. The permit also establishes an allocation of 0.3 kilograms per year of PCBs for the SEWPCP.

NPDES Waste Discharge Regulations

As discussed above, Federal Regulations, Section 402 of the federal CWA establishes the NPDES program to protect water quality of receiving waters. The NPDES program requires all facilities that discharge pollutants into waters of the United States to obtain a permit. The permit provides two levels of control--technology-based limits and water-quality-based limits--to control the discharge of pollutants for the protection of water quality. Technology-based limits are based on the ability of dischargers in the same category to treat wastewater, while water quality-based limits are required if technology-based limits are not sufficient to provide protection of the water body. Water quality-based effluent limitations required to meet water quality criteria in the receiving water are based on criteria specified in the National Toxics Rule, the California Toxics Rule, and the Basin Plan. NPDES permits must also incorporate TMDL wasteload allocations when they are developed.

The regulations initially focused on municipal and industrial wastewater discharges in 1972, followed by stormwater discharge regulations, which became effective in November 1990. NPDES permits for wastewater and industrial discharges specify discharge prohibitions and effluent limitations and also include other provisions (such as monitoring and reporting programs) deemed necessary to protect water quality. In California, the SWRCB and the RWQCBs implement and enforce the NPDES program.

Construction General Stormwater NPDES Permit (SWRCB Order No. 2009-09-DWQ)

For stormwater discharges associated with construction activity in the State of California, except those that discharge to a combined sewer system, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (Construction General Stormwater NPDES permit) in order to avoid and minimize water quality impacts attributable to such activities. Because the project site, like most of San Francisco, discharges to such a combined sewer system, the Construction General Stormwater NPDES permit is not applicable to the proposed project. Instead, construction stormwater runoff would be subject to the City's Construction Site Runoff Control Ordinance, discussed below under Regional and Local Regulations.

Regional and Local

Stormwater Design Guidelines

In January 2010, the San Francisco Public Utilities Commission adopted Stormwater Design Guidelines for San Francisco's developers, designers, engineers, and the general public. Compliance with the stormwater design guidelines is required by the San Francisco Stormwater Management

Ordinance.⁴ The Stormwater Design Guidelines encourage innovative and practical solutions that effectively integrate stormwater management into redevelopment and development of new projects. According to the Stormwater Design Guidelines, all projects disturbing more than 5,000 square feet of ground surface are required to submit a Stormwater Control Plan. The purpose of the Stormwater Control Plan is to specify how projects will comply with San Francisco's stormwater design performance measures. In accordance with the stormwater design guidelines, the stormwater performance measures for a project served by the combined sewer system requires stormwater management for both peak rate and total volume of runoff projected from the development project site. The SFPUC has made the determination that the Sunnydale-Velasco project will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events.

The complete Stormwater Control Plan must include information on the project owner/developer, project location and description, geotechnical reports, site analysis for locating and sizing BMPs, stormwater sizing calculations, and a post-construction Operations and Management Plan. Once completed, the Stormwater Control Plan must be reviewed and stamped by a licensed landscape architect, architect, or registered engineer. The Stormwater Control Plan also requires erosion and sediment control and pollution prevention measures during construction.

Construction Site Runoff Control

In November 2013, the Board of Supervisors approved and the Mayor signed the Construction Site Runoff Control Ordinance (Ord. 260-13), which amended Article 4.2 of the *Public Works Code* to add pollution prevention controls for construction site runoff discharges into the sewer system citywide. Under the ordinance, any construction project that disturbs 5,000 square feet or more of land must apply to the SFPUC for a Construction Site Runoff Control Permit prior to the start of work and to submit an Erosion and Sediment Control Plan that sets forth best management practices (BMPs) intended to control erosion control and sediment. The Erosion and Sediment Control Plan must include a vicinity map showing the location of the site in relationship the surrounding area's water courses, water bodies, and other significant geographic features; a site survey; suitable contours for the existing and proposed topography, area drainage, proposed construction and sequencing, proposed drainage channels; proposed erosion and sediment controls; dewatering controls where applicable; soil stabilization measures where applicable; maintenance controls; sampling, monitoring, and reporting schedules; and any other information deemed necessary by SFPUC. The ordinance requires that permittees perform daily inspections and maintain and repair all graded surfaces and erosion and sediment controls, drainage structures, or other protective devices, plantings, and ground cover installed while construction is active. The ordinance also provides for enforcement of violations. The Construction Site Runoff Control Ordinance took effect in December 2014.

⁴ San Francisco Board of Supervisors, "Ordinance No. 83-10: Requiring the Development and Maintenance of Stormwater Management Controls," 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

In addition to the Construction Site Runoff Control Ordinance, construction stormwater controls are mandated by Article 4.2 of the *Public Works Code*, the Industrial Waste Ordinance, and by the *San Francisco Green Building Code* (Chapter 5, Residential Requirements, and Chapter 6, Nonresidential Requirements).

City and County of San Francisco Floodplain Ordinance

The City and County of San Francisco Floodplain Management Ordinance (No. 56-10) governs new construction and major improvements to existing buildings in flood-prone areas and designates the City Administrator's Office as the City's Floodplain Administrator. In general, the ordinance requires the first floor of structures in designated flood hazard zones to be constructed above the floodplain or to be flood proofed, by improvements that reduce or eliminate the potential for flood damage.⁵ The ordinance includes provisions for flood hazard reduction including permit requirements and standards of construction. These provisions are consistent with National Flood Insurance Program requirements. The ordinance will be updated upon adoption of a final FIRM for San Francisco.⁶ In addition, the ordinance:

- Provides for variances for exceptional circumstances, including historic preservation, and extraordinary hardship and for the Port, functionally dependent maritime uses necessary for the loading and unloading of cargo and passengers.
- Incorporates the more stringent floodplain management requirements that FEMA requires be applied in areas where FIRMs show Base Flood Elevations.
- Incorporates more restrictive elements, such as the requirement to elevate new or substantially improved structures above Base Flood Elevations.
- Ties the construction standards required by the more restrictive elements to the *San Francisco Building Code*, which incorporates flood design standards published in American Society of Civil Engineers (ASCE) 24.

San Francisco Integrated Pest Management Ordinance

San Francisco's Integrated Pest Management (IPM) Ordinance (*San Francisco Environment Code*, Chapter 3), passed in 1996, requires anyone who manages weeds on properties owned by or leased from the City to emphasize prevention and non-chemical methods of weed control, and to use only the least hazardous chemical pesticides, as a last resort. When pesticides must be used on properties owned by or leased from the City, only pesticides listed on the City of San Francisco's Reduced-Risk Pesticide List (*Environment Code*, Chapter 3) may be used. The Reduced-Risk Pesticide List, compiled by the San Francisco Department of the Environment, is regularly updated as new pesticides are proposed for use. Each listed pesticide has been subject to a multi-step risk

⁵ The National Flood Insurance Program defines a structure as a walled and roofed building, including a gas or liquid storage tank, that is principally above ground. It does not include infrastructure such as streets, pipelines, and seawalls.

⁶ As part of its California Coastal Analysis and Mapping Project, FEMA is currently undertaking a San Francisco Bay Area Coastal Study, which will result in revised and updated flood and wave data for the coastal Flood Insurance Study (FIS) reports and Flood Insurance Rate Maps (FIRMs) for each of the nine Bay Area counties in 2015-2016. Available on the internet at: http://www.r9map.org/Documents/120904_FEMA-Brochure_BAC%20Study_lowres.pdf. Reviewed October 8, 2014.

assessment process. Through this screening process, the IPM Ordinance provides an additional level of environmental protection beyond the state and federal regulations by subjecting pesticide products used on lands owned by or leased from the City to further in-depth hazard assessment and hazard classification before allowing use.

4.18.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

These thresholds encompass the factors taken into account under NEPA to determine the significance of an action in terms of the context and intensity of its effects. For hydrology and water quality, the analysis considers whether the proposed project or alternatives would:

- Result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards);
- Result in depletion of groundwater volume or degradation of groundwater quality;
- Modify drainage patterns, resulting in on-site or off-site impacts; or
- Locate occupied structures where there are potential risks associated with flooding.

Significance Criteria under CEQA

For hydrology and water quality, the analysis considers whether the proposed project or alternatives would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map;
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows;
- 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; and

- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Approach to Analysis

The following analysis considers existing conditions, proposed project design and current regulatory requirements.

Proposed Project

Impact HY-1: Effects on Water Quality Standards

NEPA: The proposed project would not result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards). (Less than Significant)

CEQA: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Less than Significant)

Construction

Over the construction period, there would be a potential for erosion and transportation of soil particles during site preparation, excavation, foundation pouring, and construction activities. Once in surface water runoff, sediment and other pollutants could leave the construction site and ultimately be released into the San Francisco Bay. Stormwater runoff from project construction would drain into the combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant (SEWPCP) prior to discharge into San Francisco Bay. Pursuant to the *San Francisco Public Works Code*, including the Construction Site Runoff Control Ordinance, and the *San Francisco Green Building Code*, the project sponsor would be required to implement an Erosion and Sediment Control Plan that sets forth BMP measures to reduce potential runoff and erosion impacts.

In addition, adherence to the Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) would reduce the quantity of dust generated during site preparation, demolition and construction work in order to protect the health of the general public and of onsite workers, minimizing public nuisance complaints, and avoiding 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 that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil, such as the proposed project, comply with specified dust control measures whether or not the activity requires a permit from DBI and would have a net effect of minimizing the potential for erosion.

The project sponsor and the contractor responsible for construction activities at the project site would be required to incorporate erosion control BMPs as well as control construction dust on the site or other practices that result in equivalent dust control that are acceptable to the Director of DBI. The Construction Site Runoff Control Ordinance requires mandatory BMPs to reduce

erosion and sedimentation, which may include incorporation of straw wattles at stormwater inlets or other measures to reduce erosion runoff.

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 (non-potable) 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 7 days) greater than 10 cubic yards or 500 square feet of excavated materials, backfill material, import material, gravel, sand, road base, and soil shall be covered with a 10 millimeter (0.01 inch) polyethylene plastic (or equivalent) tarp, braced down, or use other equivalent soil stabilization techniques.

In addition, grading and excavation activities may require dewatering during construction. During the preliminary geotechnical investigation, groundwater was encountered in some of the borings that ranged from 11 to 48 feet below ground surface.⁷ Groundwater elevations can vary considerably with seasonal fluctuations. Any groundwater encountered during construction of the proposed project would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system. The Bureau of Environmental Regulation and Management of the San Francisco Public Utilities Commission must be notified of projects necessitating dewatering, and may require water analysis before discharge. The final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the report would contain a determination as to whether or not a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in the *San Francisco Building Code*) be retained by the project sponsor to perform this monitoring.

Operation

Currently, all wastewater from the existing buildings and stormwater runoff from the project site is treated at the Southeast Water Pollution Control Plant. The proposed project would construct all improvements according to the San Francisco Stormwater Management Ordinance, which requires treatment of all runoff prior to leaving the site. The proposed stormwater management system for the project would collect, detain and potentially retain some stormwater within the project site such that the rate and amount of stormwater run off from the site does not negatively impact the City's treatment facilities, and in a manner that is consistent with the SFPUC's Stormwater Design Guidelines. The stormwater treatment features would include seasonal

⁷ Engeo Incorporated, Geotechnical Report – Sunnydale – Velasco Redevelopment, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

waterways and rain gardens (planted depressions that allow rainwater runoff from walkways, parking lots, and roofs, to be absorbed into the ground); bioswales for stormwater retention in the public right of way where grades allow and on private lots; porous concrete pavements used in sidewalks and parking areas of the public right-of-way where grades allow; community growing gardens; residential courtyards; playgrounds; and community parks. Treatment would be provided pursuant to the effluent discharge standards contained in the City's NPDES permit for the wastewater treatment plant. During operation, the proposed project would be required to comply with all local wastewater discharge and water quality requirements.

Conclusion

As discussed above, the proposed project would be required to adhere to the *San Francisco Building Code*, the City's Construction Site Runoff Control Ordinance, the City's Dust Control Ordinance, and Industrial Waste Ordinance. Adherence to these requirements would ensure that the proposed project would not substantially degrade water quality during either construction or operation.

The impact would be *less than significant* under NEPA because the proposed project would not result in depletion or degradation of surface water quality.

The impact would be *less than significant* under CEQA because the proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Mitigation: None required.

Impact HY-2: Effects on Groundwater

NEPA: The proposed project would not result in depletion of groundwater volume or degradation of groundwater quality. (Less than Significant)

CEQA: The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Less than Significant)

The proposed project would use potable water from the San Francisco Public Utilities Commission (SFPUC). Groundwater is not used as drinking water at the project site. The project is not served by an EPA-designated sole-source aquifer watershed and would not affect a sole-source aquifer subject to the HUD-EPA Memorandum of Understanding.^{8,9,10}

⁸ United States Environmental Protection Agency, Groundwater website: <http://epa.gov/region09/water/groundwater/ssa.html>, Pacific Southwest, Region 9, accessed April 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ United States Environmental Protection Agency. Sole Source Aquifers subject to HUD-EPA Memorandum of Understanding, dated April 30, 1990. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ United States Environmental Protection Agency, Sole Source Aquifers in Region 9, Internet Web Site: <http://www.epa.gov/region9/water/groundwater/ssa-pdfs/ssafact.pdf>, accessed April 8, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The project site is currently partially covered with impervious surfaces and natural groundwater flow continues under and around the site. Construction of the proposed project may increase impervious surface coverage on the site, which would reduce groundwater recharge. However, as stated above, the project would include features such as rain gardens, bioswales, and porous pavements that would limit offsite runoff rate and volume to be in accordance with Stormwater Design Guidelines. As stated above, the SFPUC has made the determination that the proposed project will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events. Implementation of the stormwater management system would include measures that allow infiltration of groundwater. In addition, any potential dewatering activities that might be necessary during construction would be temporary in nature and not have any substantive effect on aquifer volume or groundwater table levels. Therefore, the proposed project would not substantially alter existing groundwater or surface flow conditions.

The impact would be *less than significant* under NEPA because the proposed project would not result in depletion of groundwater volume or degradation of groundwater quality.

The impact would be *less than significant* under CEQA because the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Mitigation: None required.

Impact HY-3: Effects on Drainage

NEPA: The proposed project would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts. (Less than Significant)

CEQA: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. (Less than Significant)

The project site slopes generally from west to east, at grades ranging from 15.5 percent at its highest point to 2 percent slope at the lower elevations. The average grade is 9 percent. The site sits below McLaren Park in what is known as the Sunnydale Basin, which drains east toward the San Francisco Bay. Historic maps indicate a former creek at the north boundary of the site, which is not evident today.¹¹ The proposed project would alter drainage onsite, but ultimately site runoff that is not captured and allowed to enter the groundwater through various site features would continue to drain to the city's combined storm and sanitary sewer system. Therefore, the

¹¹ Van Meter Williams Pollack, *A New Sunnydale; Existing Conditions Analysis*, Draft April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

project would not substantially alter drainage patterns. Any foundations or portions of buildings built below grade would be water tight to avoid the need to permanently pump and discharge water.¹² Implementation of the stormwater management system would include features that ultimately reduce stormwater flow rate and volume by allowing for onsite infiltration. Increased infiltration of stormwater runoff and adherence to existing drainage control requirements would therefore reduce the potential for erosion or siltation on- or off-site. The proposed project would not substantially affect surface or ground water quality, as discussed in Impact HY-1.

The impact is considered *less than significant* under NEPA because the proposed project would modify drainage patterns, but not in a manner that would result in on-site or off-site drainage impacts.

The impact is considered *less than significant* under CEQA because the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.

Mitigation: None required.

Impact HY-4: Effects on Stormwater Capacity

NEPA: This topic is not separately covered under NEPA.

CEQA: The proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

The Sunnydale Watershed has been part of SFPUC planning efforts that studied the current capacities of existing drainage infrastructure. (See Impact UT-1 in Section 4.14 for a discussion of the Sunnydale Auxiliary Sewer Project improvements currently being undertaken by the City.) According to preliminary calculations, the current system would be overloaded without flow controls because the project would result in more impervious surfaces, which would increase stormwater flows. Moreover, the additional 915 units would contribute additional sanitary sewage to the existing combined sewer system.¹³ As stated above under Impact HY-3, because the proposed project would adhere to a Stormwater Management Plan, consistent with the SFPUC's Stormwater Design Guidelines, that would limit the amount of runoff leaving the site, there would be not be a substantial increase in the quantity and rate of stormwater runoff from the site that flows to the city's combined sewer system. With implementation of the stormwater management system, some of the proposed features such as rain gardens, bioswales and porous pavements may even reduce total stormwater runoff rates and volume compared to existing conditions. As stated above under Impact HY-1, stormwater runoff from project construction would drain into the

¹² Engeo, Incorporated, *Geotechnical Report – Sunnydale – Velasco Redevelopment*, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹³ *Ibid.*

combined sewer and stormwater system and be treated at the Southeast Water Pollution Control Plant prior to discharge into San Francisco Bay. Pursuant to the *San Francisco Building Code* and the City's NPDES permit, the project sponsor would be required to implement measures to reduce potential erosion impacts.

Therefore, the impact is considered *less than significant* under CEQA because the proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation: None required.

Impact HY-5: Flooding Effects on Occupied Structures

NEPA: The proposed project would not locate occupied structures where there are potential risks associated with flooding. (No Impact)

CEQA: The proposed project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows. (No Impact)

Flood risk assessment and some flood protection projects are conducted by federal agencies including the Federal Emergency Management Agency (FEMA) and the Corps. The flood management agencies and cities implement the National Flood Insurance Program (NFIP) under the jurisdiction of FEMA and its Flood Insurance Administration. The City of San Francisco has not historically participated in the NFIP and no flood maps are adopted for the City. However, FEMA is preparing Flood Insurance Rate Maps (FIRMs) for the City and County of San Francisco for the first time. FIRMs identify areas that are subject to inundation during a flood having a one percent chance of occurrence in a given year (also known as a "base flood" or "100-year flood"). As described in the Regulatory Setting, FEMA refers to the floodplain that is at risk from a flood of this magnitude as an SFHA.

Because FEMA has not previously published a FIRM for the City and County of San Francisco, there are no identified SFHAs within San Francisco's geographic boundaries. FEMA has completed the initial phases of a study of the San Francisco Bay. On September 21, 2007, FEMA issued a preliminary FIRM of San Francisco for review and comment by the City. The City has submitted comments on the preliminary FIRM to FEMA. FEMA anticipates publishing a revised preliminary FIRM, after completing the more detailed analysis requested by City staff. After reviewing comments and appeals related to the revised preliminary FIRM, FEMA will finalize the FIRM and publish it for flood insurance and floodplain management purposes.

Given that FEMA has not yet published a FIRM for the City, the City Administrator's Office has created an "Interim Floodplain Map" based on preliminary data provided by FEMA showing floodplains within the City. According to the preliminary map, the proposed project is neither within Zone A (areas subject to inundation by tidal surge) nor Zone V (areas of coastal flooding

subject to wave hazards).¹⁴ The project site is not within a floodplain designated on the City's interim floodplain maps, and it has not potential to redirect flood flows. Therefore, the project would comply with the Federal Flood Disaster Protection Act and Executive Order 11988.

As stated in Section 3.18, the project site is also subject to flooding from sewer backups. Evidence of sewer backups can be seen with sewage flow over the sidewalks. These backups are caused by clogged sewer laterals from partial pipe collapse or root intrusion.¹⁵ Replacement of the wastewater and stormwater collection systems under the proposed project would ensure that flooding due to on-site infrastructure deficiencies no longer occurs.

The proposed project would result in *no impact* under NEPA because it would not locate occupied structures where there are potential risks associated with flooding.

The proposed project would result in *no impact* under CEQA because it would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows.

Mitigation: None required.

Impact HY-6: Effects from Dam or Levee Failure

NEPA: This topic is not separately covered under NEPA.

CEQA: 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. (No Impact)

The project site is not located within any dam inundation areas and is not otherwise protected by a levee system.¹⁶ There would be *no impact* under CEQA because 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.

Mitigation: None required.

¹⁴ Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at <http://sfgsa.org/index.aspx?page=828>, accessed July 31, 2013; San Francisco Interim Citywide Floodplain Map, Final Draft, July 2008, available on the internet at: <http://sfgsa.org/Modules/ShowDocument.aspx?documentid=1761>. Reviewed July 31, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁵ KPFF Consulting Engineers, Sunnydale Development Existing Infrastructure Deficiencies, April 23, 2012.

¹⁶ Association of Bay Area Governments (ABAG), *Dam Failure Inundation Hazard Map for San Francisco*, <http://www.abag.ca.gov/cgi-bin/pickdamx.pl>, accessed March 19, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Impact HY-7: Effects from Seiche, Tsunami, or Mudflow

NEPA: This topic is not separately covered under NEPA.

CEQA: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (No Impact)

The project site is located at an elevation of 75 to 250 feet above sea level and not subject to tsunami or seiche wave run-up. According to inundation hazard maps of the *San Francisco General Plan* (Maps 6 and 7 in the Community Safety Element), the project site is outside of any identified hazard areas.

Therefore, there would be *no impact* under CEQA because the proposed project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Mitigation: None required.

Proposed Project Variant

The proposed project variant would be located at the same site. It would have the same building footprints as the proposed project. Therefore, for the purposes of this analysis, the variant is considered to have generally similar changes to existing drainage patterns as the proposed project. As a result, the proposed project variant would be subject to the same storm drainage requirements as the proposed project including the *San Francisco Stormwater Ordinance Code* and NPDES requirements.

Alternative A: Reduced Development / Density Alternative

Impact A-HY-1: Effects on Water Quality Standards

NEPA: The Reduced Development / Density Alternative would not result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards). (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Less than Significant)

Construction

As discussed above for the proposed project, construction activities would have the potential for erosion and transportation of soil particles to occur during site preparation, excavation, foundation pouring, and construction activities. The project sponsor would be required to implement the above-described regulatory measures to reduce potential erosion impacts, including the *San Francisco Public Works Code*, including the Construction Site Runoff Control

Ordinance, and the *San Francisco Green Building Code*, and the City's Dust control Ordinance. Groundwater encountered during construction of the alternative would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system. Construction BMPs would also reduce the accumulation of eroded sediments in surface runoff entering storm drains.

Operation

The Reduced Development / Density Alternative would construct all improvements according to the San Francisco Stormwater Management Ordinance, which requires management of all runoff prior to leaving the site. During operation, the alternative would be required to comply with all local wastewater discharge and water quality requirements. BMPs could include vegetated swales, setbacks and buffers, rooftop and impervious surface disconnection, bioretention cells, rain gardens, rain cisterns, implementation of pollution/ sediment/spill control plans, training, and other structural and non-structural actions.

Conclusion

Therefore, the Reduced Development / Density Alternative would not substantially degrade water quality during either construction or operation.

The impact would be *less than significant* under NEPA because the alternative would not result in depletion or degradation of surface water quality.

The impact would be *less than significant* under CEQA because the alternative would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Mitigation: None required.

Impact A-HY-2: Effects on Groundwater

NEPA: The Reduced Development / Density Alternative would not result in depletion of groundwater volume or degradation of groundwater quality. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Less than Significant)

As discussed above, groundwater is not used as a potable water supply at the project site. The site is currently partially covered with impervious surfaces, and the Reduced Development / Density Alternative would include features that would limit, if not reduce, offsite runoff rates compared to existing rates. As stated above, groundwater encountered during construction of the alternative would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it

may be discharged into the sewer system. In addition, the alternative would need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events.

The Reduced Development / Density Alternative would not substantially alter existing groundwater or surface flow conditions.

The impact would be *less than significant* under NEPA because the alternative would not result in depletion of groundwater volume or degradation of groundwater quality.

The impact would be *less than significant* under CEQA because the alternative would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Mitigation: None required.

Impact A-HY-3: Effects on Drainage

NEPA: The Reduced Development / Density Alternative would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. (Less than Significant)

The Reduced Development / Density Alternative would alter drainage onsite in approximately the same manner as the proposed project, given the site plans are almost identical, but ultimately site runoff would continue to drain to the city's combined storm and sanitary sewer system as discussed above for the proposed project. Like the proposed project, the alternative would not substantially alter drainage patterns, and it would be required to implement a stormwater management program. Increased infiltration of stormwater runoff and adherence to existing drainage control requirements would reduce the potential for erosion or siltation on-or off-site.

The Reduced Development / Density Alternative would result in a *less than significant* impact under NEPA because it would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts.

The impact is considered *less than significant* under CEQA because the alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.

Mitigation: None required.

Impact A-HY-4: Effects on Stormwater Capacity

NEPA: This topic is not separately covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

As discussed above for the proposed project, the Sunnydale Watershed has been part of SFPUC planning efforts that studied the current capacities of existing drainage infrastructure which found that the current system would be overloaded without flow controls.¹⁷ Similar to the proposed project, the Reduced Development / Density Alternative's stormwater controls would limit amount of rate and total runoff leaving the site such that it would not adversely affect the city's combined sewer system. SFPUC has made the determination that the alternative will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events, which would sufficiently reduce runoff. With implementation of the stormwater management system, some of the proposed features such as rain gardens, bioswales and porous pavements may even reduce total stormwater runoff rates and volume compared to existing conditions. The impact would be considered *less than significant* under CEQA because the alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation: None required.

Impact A-HY-5: Flooding Effects on Occupied Structures

NEPA: The Reduced Development / Density Alternative would not locate occupied structures where there are potential risks associated with flooding. (No Impact)

CEQA: The Reduced Development / Density Alternative would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows. (No Impact)

The project site is not located within a 100-year flood hazard zone, and therefore it would not redirect flood flows. In addition, replacement of the wastewater and stormwater collection systems under the alternative would ensure that flooding due to on-site infrastructure deficiencies no longer occurs.

¹⁷ *Ibid.*

The alternative would have *no impact* under NEPA because it would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.

The alternative would have *no impact* under CEQA because it would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows.

Mitigation: None required.

Impact A-HY-6: Effects from Dam or Levee Failure

NEPA: This topic is not separately covered under NEPA.

CEQA: The Reduced Development / Density Alternative 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. (No Impact)

The project site is not located within any dam inundation areas and is not otherwise protected by a levee system.¹⁸ There would be *no impact* under CEQA because the alternative 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.

Mitigation: None required.

Impact A-HY-7: Effects from Seiche, Tsunami, or Mudflow

NEPA: This topic is not separately covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (No Impact)

The project site is located at an elevation of 75 to 250 feet above sea level and not subject to tsunami or seiche wave run-up. The project site is outside of identified hazard areas. Therefore there would be *no impact* under CEQA because the alternative would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Mitigation: None required.

¹⁸ Association of Bay Area Governments (ABAG), 2013, *op cit*.

Alternative B: One-for-One Replacement Alternative

Impact B-HY-1: Effects on Water Quality Standards

NEPA: The One-for-One Replacement Alternative would not result in depletion or degradation of surface water quality (such as through violation of existing or proposed water quality standards). (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Less than Significant)

Construction

As discussed above for the proposed project, the construction period would have the potential for erosion and transportation of soil particles to occur during site preparation, excavation, foundation pouring, and construction activities. Pursuant to the *San Francisco Public Works Code*, including the Construction Site Runoff Control Ordinance, and the *San Francisco Green Building Code*, the project sponsor would be required to implement an Erosion and Sediment Control Plan that sets forth BMP measures to reduce potential runoff and erosion impacts.

These measures include adherence to the Construction Dust Control Ordinance, which requires that all site preparation work, demolition, or other construction activities within San Francisco that 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. BMPs would be implemented, such as laying down straw wattles at storm drains, to reduce flows of eroded sediments to the stormwater system. Any groundwater encountered during construction of the alternative would be subject to requirements of the City's Industrial Waste Ordinance (Ordinance Number 199-77), requiring that groundwater meet specified water quality standards before it may be discharged into the sewer system.

Operation

The One-for-One Replacement Alternative would include construction of all improvements according to the San Francisco Stormwater Management Ordinance, which requires treatment of all runoff prior to leaving the site. BMPs could include vegetated swales, setbacks and buffers, rooftop and impervious surface disconnection, bioretention cells, rain gardens, rain cisterns, implementation of pollution/ sediment/spill control plans, training, and other structural and non-structural actions. Treatment would be provided pursuant to the effluent discharge standards contained in the City's NPDES permit for the wastewater treatment plant. During operation, the proposed project would be required to comply with all local wastewater discharge and water quality requirements.

Conclusion

The One-for-One Replacement Alternative would not substantially degrade water quality during either construction or operation.

The impact would be *less than significant* under NEPA because the alternative would not result in depletion or degradation of surface water quality.

The impact would be *less than significant* under CEQA because the alternative would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Mitigation: None required.

Impact B-HY-2: Effects on Groundwater

NEPA: The One-for-One Replacement Alternative would not result in depletion of groundwater volume or degradation of groundwater quality. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Less than Significant)

Although the alternative would include new buildings in the same general location as existing buildings, a detailed design of this alternative has not been prepared. Therefore, construction of the alternative may increase impervious surface coverage on the site, regardless. Any increases in impervious surfaces would likely be limited compared to existing conditions, and implementation of the stormwater management system would include measures that allow infiltration of groundwater. In addition, the SFPUC has made the determination that the alternative will need to submit a Stormwater Control Plan that shows that the project meets the performance requirement equivalent to LEED c6.1, Option 1; where the post-development peak discharge rate and total volume must not exceed the pre-development peak discharge rate and total volume for the 1- and 2-year, and 24-hour storm events. Therefore, the One-for-One Replacement Alternative would not substantially alter existing groundwater or surface flow conditions.

The impact would be *less than significant* under NEPA because the alternative would not result in depletion of groundwater volume or degradation of groundwater quality.

The impact would be *less than significant* under CEQA because the alternative would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Mitigation: None required.

Impact B-HY-3: Effects on Drainage

NEPA: The One-for-One Replacement Alternative would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site. (Less than Significant)

The One-for-One Replacement Alternative would somewhat alter drainage onsite, but ultimately site runoff would continue to drain to the city's combined storm and sanitary sewer system as discussed above for the proposed project. During construction, increased infiltration of stormwater runoff and adherence to existing drainage control requirements would reduce the potential for erosion or siltation on- or off-site. As stated above under Impact B-HY-2, during operation, stormwater flows from the alternative would not substantially change compared to existing conditions.

The One-for-One Replacement Alternative would result in a *less than significant* impact under NEPA because it would modify drainage patterns, but not in a manner that would result in on-site or off-site impacts.

The impact is considered *less than significant* under CEQA because the alternative would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site.

Mitigation: None required.

Impact B-HY-4: Effects on Stormwater Capacity

NEPA: This topic is not separately covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

As discussed above for the proposed project, the Sunnydale Watershed has been part of SFPUC planning efforts that studied the current capacities of existing drainage infrastructure which found that the current system would be overloaded without flow controls.¹⁹ The One-for-One Replacement Alternative would not substantially change the amount of runoff leaving the site. Pursuant to the *San Francisco Building Code* and the City's NPDES permit, the project sponsor would be required to implement measures to reduce potential erosion impacts. Replacement of the wastewater and stormwater collection systems under the alternative would ensure that

¹⁹ *Ibid.*

flooding due to on-site infrastructure deficiencies no longer occurs. The impact would be considered *less than significant* under CEQA because the alternative would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation: None required.

Impact B-HY-5: Flooding Effects on Occupied Structures

NEPA: The One-for-One Replacement Alternative would not locate occupied structures where there are potential risks associated with flooding. (No Impact)

CEQA: The One-for-One Replacement Alternative would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, and it would not redirect flood flows. (No Impact)

The project site is not located within a 100-year flood hazard zone, and therefore it would not redirect flood flows. In addition, replacement of the wastewater and stormwater collection systems would ensure that flooding due to on-site infrastructure deficiencies no longer occurs.

The alternative would have *no impact* under NEPA because it would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.

The alternative would have *no impact* under CEQA because it would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map.

Mitigation: None required.

Impact B-HY-6: Effects from Dam or Levee Failure

NEPA: This topic is not separately covered under NEPA.

CEQA: The One-for-One Replacement Alternative 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. (No Impact)

The project site is not located within any dam inundation areas and is not otherwise protected by a levee system.²⁰ There would be *no impact* under CEQA because the alternative 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.

²⁰ Association of Bay Area Governments (ABAG), 2013, *op cit*.

Mitigation: None required.

Impact B-HY-7: Effects from Seiche, Tsunami, or Mudflow

NEPA: This topic is not separately covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (No Impact)

The project site is located at an elevation of 75 to 250 feet above sea level and not subject to tsunami or seiche wave run-up. There would be *no impact* under CEQA because the alternative would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Mitigation: None required.

Alternative C: No Action Alternative

Under the No Action Alternative, there would be no change to existing drainage patterns and no change to water quality or quantity in stormwater runoff. As a result, the existing pollutants that enter into the stormwater runoff would continue to be treated and addressed pursuant to the City's NPDES permit for the wastewater treatment plant. The No Action Alternative would not benefit from LID drainage control measures that would be part of project design under the various other alternatives. There would be *no impacts* under NEPA and *no impacts* under CEQA.

4.18.3 Cumulative Impacts

Impact CC-HY: Cumulative Hydrology and Water Quality Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to hydrology or water quality. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse impacts to hydrology or water quality. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The geographic context for cumulative hydrologic effects is the San Francisco Bay Area Hydrologic Unit.

As stated above, the proposed project would result in less-than-significant impacts to drainage patterns, water quality of receiving waters, and groundwater levels. Implementation of the project would adhere to regulatory requirements and include design measures (rain gardens, bioswales, and porous pavement) that would reduce the potential for direct hydrology and water quality impacts to less than significant levels.

Similar regulatory requirements as those described above for the Project would also apply to potential future development in the region, as described in the Regulatory Setting. For example, cumulative development projects would be required to follow stormwater control measures, dust control and dewatering water quality regulations, similar to the proposed project. The NPDES permit puts design requirements on all future development considers regional issues as well as the goals and policies of the San Francisco Bay Basin Plan.

Redevelopment of the project site would not substantially alter groundwater recharge. As stated above, the proposed project would use potable water from the San Francisco Public Utilities Commission (SFPUC). Groundwater is not used as drinking water at the project site, or within the City and County of San Francisco. The project is not served by an EPA-designated sole-source aquifer watershed and would not affect a sole-source aquifer subject to the HUD-EPA Memorandum of Understanding.^{21,22,23} Cumulative projects generally would be developed in areas where groundwater recharge is not used as a potable water source.

Therefore, cumulative hydrology and water quality impacts would be *less than significant* under NEPA because the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to hydrology or water quality.

There would be *less than significant* cumulative impacts under CEQA because the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to hydrology or water quality.

The variant and alternatives would be very comparable to the proposed project as they would be required to meet design requirements in terms of stormwater management that protects regional hydrologic resources.

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- ²¹ United States Environmental Protection Agency, Groundwater website: <http://epa.gov/region09/water/groundwater/ssa.html>, Pacific Southwest, Region 9, accessed April 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.
- ²² United States Environmental Protection Agency. Sole Source Aquifers subject to HUD-EPA Memorandum of Understanding, dated April 30, 1990. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.
- ²³ United States Environmental Protection Agency, Sole Source Aquifers in Region 9, Internet Web Site: <http://www.epa.gov/region9/water/groundwater/ssa-pdfs/ssafact.pdf>, accessed April 8, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

4.19 Hazards and Hazardous Materials

4.19.1 Regulatory Framework

Federal

Department of Housing and Urban Development Environmental Policy

As stated in CFR 50.3(i)(1), “it is HUD policy that all property proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gasses, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property.”

Resource Conservation and Recovery Act of 1976

The United States Environmental Protection Agency (U.S. EPA) regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in a “cradle to grave” manner through the Resource Conservation and Recovery Act (RCRA). RCRA sets standards for hazardous waste treatment storage and disposal units intended to manage hazardous wastes in a manner that minimizes present and future threats to the environment and human health. RCRA was amended in 1984 to reaffirm the regulation from generation to disposal and to prohibit the use of certain techniques for hazardous waste disposal. Locally, the U.S. EPA has largely delegated responsibility for implementing the RCRA program to the State of California, which implements this program through the California Hazardous Waste Control Law.

Occupational Safety and Health Act of 1970

Federal and occupational health and safety regulations also contain provisions regarding hazardous waste management through the Occupational Safety and Health Act of 1970 (amended). Code 29 of Federal Regulations (29 CFR) requires special training of handlers of hazardous materials; notification to employees who work in the vicinity of hazardous materials; acquisition from the manufacturer of material safety data sheets (MSDS), which describe the proper use of hazardous materials; and training of employees to remediate any hazardous material accidental releases. The Occupational Safety and Health Administration (OSHA) regulates administration of 29 CFR.

Safety and Health Regulations for Construction

OSHA also establishes standards regarding safe exposure limits for chemicals to which construction workers may be exposed. Safety and Health Regulations for Construction (29 CFR 1926.65 Appendix C) contains requirements for construction activities, which include occupational health and environmental controls to protect worker health and safety. The guidelines describe the health and safety plan(s) that must be developed and implemented during construction, including associated training, protective equipment, evacuation plans, chains of command, and emergency response procedures.

Due to the known and potential existence of hazardous materials in the vicinity of the project site, adherence to applicable hazard-specific OSHA standards would be required to maintain worker safety. For example, methane is regulated by OSHA under 29 CFR Part 1910.146 relative to worker exposure to a "hazardous atmosphere" within confined spaces where the presence of flammable gas vapor or mist is in excess of 10 percent of the lower explosive limit.

Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)] and Accident Potential Zones [24 CFR Part 51 Subpart D]

Subpart D of 24 CFR regulates the siting of U.S. Department of Housing and Urban Development (HUD)-assisted projects in runway clear zones at civil airports. The purpose of this subpart is to promote compatible land uses around civil airports and military airfields by identifying suitable land uses for Runway Clear Zones at civil airports and Clear Zones and Accident Potential Zones at military airfields and by establishing them as standards for providing HUD assistance, subsidy or insurance.

Toxic Chemicals and Radioactive Materials [24 CFR Part 58, Sec 5(i)(2)]

Part 58 of 24 CFR provides instructions and guidance to recipients of HUD assistance and other responsible entities for conducting an environmental review for a particular project or activity and for obtaining approval of a Request for Release of Funds.

Explosive and Flammable Operations [24 CFR Part 51 C]

The purpose of 24 CFR Part 51 subpart C is to:

- Establish safety standards which can be used as a basis for calculating acceptable separation distances (ASD) for HUD-assisted projects from specific, stationary, hazardous operations which store, handle, or process hazardous substances;
- Alert those responsible for the siting of HUD-assisted projects to the inherent potential dangers when such projects are located in the vicinity of such hazardous operations;
- Provide guidance for identifying those hazardous operations which are most prevalent;
- Provide the technical guidance required to evaluate the degree of danger anticipated from explosion and thermal radiation (fire); and
- Provide technical guidance required to determine acceptable separation distances from such hazards.

State

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In 1996, the California Environmental Protection Agency (CalEPA) adopted the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates and coordinates the six state programs that regulate business and industry use, storage, handling, and disposal of hazardous materials and wastes. For the project site, the

San Francisco Department of Public Health is the Certified Unified Program Agency (CUPA). Under the Unified Program, any future user storing hazardous materials and/or waste at their business site is required to submit business information and hazardous materials inventory forms to the CUPA.

California Accidental Release Prevention

In 1997 California Environmental Protection Agency (CalEPA) implemented Accidental Release Prevention (CalARP). CalARP is intended to prevent accidental releases of those substances determined to potentially pose the greatest risk of immediate harm to the public and the environment. Regulated materials are toxic and flammable substances listed in Tables 1 through 3 of CCR Title 19 Section 2770.5, and includes such chemicals as acrolein, chlorine, furan, sulfur trioxide, butane, hydrogen, vinyl fluoride, ammonia, boron trifluoride, lindane, phosphorous, sarin, tabun, and several others. Under the program, CUPAs interact directly with businesses that handle, manufacture, use, or store any of the regulated substances over a threshold level. Also, such businesses are required to file a Risk Management Plan (RMP) with the local CUPA. The regulations that define the RMP process are given in the *California Health and Safety Code* Sections 25531-25543.3. An RMP provides additional planning information that covers equipment and systems safety, operating procedures, preventive maintenance, upset risk assessments, and safety auditing. The State Office of Emergency Services has primary responsibility for regulating acutely hazardous materials. Local governments have the lead role for working directly with businesses in implementing this program.

Hazardous Waste Control Law (HWCL)

The Hazardous Waste Control Act was passed in 1972 and established the California Hazardous Waste Control Program within the Department of Health Services. California's hazardous waste regulatory effort became the model for the federal Resource Conservation and Recovery Act (RCRA). California's program, however, was broader and more comprehensive than the federal system, regulating wastes and activities not covered by the federal program. California's Hazardous Waste Control Law was followed by emergency regulations in 1973 that clarified and defined the hazardous waste program, as follows:

- Included were definitions of what was a waste and what was hazardous as well as what was necessary for appropriate handling, processing, and disposal of hazardous and extremely hazardous waste in a manner that would protect the public, livestock, and wildlife from hazards to health and safety.
- The early regulations also established a tracking system for the handling and transportation of hazardous waste from the point of waste generation to the point of ultimate disposition, as well as a system of fees to cover the costs of operating the hazardous waste management program.
- Advancing the newly developing awareness of hazardous waste management issues, the program established a technical reference center, for public and private use, dealing with all aspects of hazardous waste management.

California Code of Regulations

Title 8 – CalOSHA. State Occupational Safety and Health Administration (CalOSHA) administers federal occupational safety requirements and additional state requirements in accordance with *California Code of Regulations* Title 8. CalOSHA requires preparation of an Injury and Illness Prevention Program (IIPP), which is an employee safety program of inspections, procedures to correct unsafe conditions, employee training, and occupational safety communication. This program is administered via inspections by the local CalOSHA enforcement unit.

CalOSHA regulates lead exposure during construction activities under CCR Title 8, Section 1532.1, Lead, which establishes the rules and procedures for conducting demolition and construction activities such that worker exposure to lead contamination is minimized or avoided.

Compliance with CalOSHA regulations and associated programs would be required for the proposed project due to the potential hazards posed by hazardous building materials.

Title 24, Part 9 – California Fire Code. The *California Fire Code* regulates the type, configuration, and quantity of hazardous materials that may be stored within structures or in outdoor areas. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises; and to provide safety and assistance to firefighters and emergency responders during emergency operations.

Lead and Lead-Based Paint

Pursuant to *California Code of Regulations*, Title 22 Section 66261.24, waste soil containing lead is classified as hazardous if the lead exceeds a total concentration of 1,000 parts per million (“ppm”) and a soluble concentration of 5 ppm. More discussion of lead-based paint regulations follows below in Regional and Local.

Asbestos Airborne Toxic Control Measure

Section 19827.5 of the *California Health and Safety Code* requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified of any demolition or renovation project that involves the removal of 100 square feet or more of asbestos-containing materials 10 days in advance of the work.

The local office CalOSHA must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.17 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Pursuant to California law, the San Francisco DBI would not issue the required permit until the applicant has complied with notice and abatement requirements.

Regional and Local

San Francisco Hazardous Materials and Waste Program

The Hazardous Materials and Waste Program is the state-designated enforcement program in San Francisco for the Hazardous Materials Unified Program Agency. The Hazardous Materials and Waste Program implements six state environmental mandates and two local mandates. Staff inspect regulated businesses at least once every 3 years. All businesses are required to prepare and implement a Hazardous Materials Business Plan. The regulated programs, listed below, each contain specific requirements under each respective program:

- Aboveground Petroleum Storage
- California Accidental Release Prevention Program
- Chlorofluorocarbon Recycling
- Hazardous Materials Storage and Use
- Hazardous Waste Generation
- Hazardous Waste Treatment
- Medical Waste Generation
- Underground Storage Tanks

San Francisco General Plan

The *San Francisco General Plan* includes goals and policies that address public safety, including hazardous materials and fire safety. The Community Safety Element and the Environmental Protection Element of the *San Francisco General Plan* contain policies relating to hazardous materials requiring enforcement of state and local codes regulating hazardous materials use, storage, transportation, discharge, accidental release, and disposal.

San Francisco Building Code: Lead-Based Paint

Work that could result in disturbance of lead-based paint must comply with Section 3426 of the *San Francisco Building Code*, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Where there is any work that may disturb or remove lead paint on the exterior of any building built prior to December 31, 1978, Section 3426 requires specific notification and work standards, and identifies prohibited work methods and penalties. (Notices are commonly placed on residential and other buildings in San Francisco that are undergoing re-painting. Generally affixed to a drape that covers all or portions of a building, these notices are a required part of the Section 3426 notification procedure.)

Section 3426 applies to the exterior of all buildings or steel structures on which original construction was completed prior to 1979 (which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis), and to the interior of residential buildings, hotels, and childcare centers. The ordinance contains performance standards, including establishment of containment barriers, at least as effective at protecting human health and the environment as those in the HUD Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards) and identifies prohibited practices that

may not be used in disturbances or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground from contamination during exterior work; protect floors and other horizontal surfaces from work debris during interior work; and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Clean-up standards require the removal of visible work debris, including the use of a High Efficiency Particulate Air Filter (HEPA) vacuum following interior work.

The ordinance also includes notification requirements and requirements for signs. Prior to the commencement of work, the responsible party must provide written notice to the Director of the DBI, of the address and location of the project; the scope of work, including specific location; methods and tools to be used; the approximate age of the structure; anticipated job start and completion dates for the work; whether the building is residential or nonresidential, owner-occupied or rental property; the dates by which the responsible party has or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. (Further notice requirements include sign when containment is required, notice to occupants, availability of pamphlet related to protection from lead in the home, and early commencement of work [requested by tenant]). The ordinance contains provisions regarding inspection and sampling for compliance by DBI, and enforcement, and describes penalties for non-compliance with the requirements of the ordinance.

San Francisco Health Code: Contaminated Soil and Groundwater

Article 22A of the *San Francisco Health Code* (also known as the Maher Ordinance), as amended in August 2013, is applicable to sites either currently or previously either zoned for or permitted for industrial use; within 150 feet of any of the elevated portions of U.S. Highway 101, Interstate 80 or Interstate 280; on a lot known or suspected by DPH to contain hazardous substances in the soil and/or groundwater; or on a lot known or suspected by DPH to contain or to be within 100 feet of an underground storage tank. Article 22A requires, prior to issuance of a building permit, that the project sponsor retain the services of a qualified professional to prepare a Phase I Environmental Site Assessment (ESA) that meets the requirements of *Health Code* Section 22.A.6. The Phase I ESA would determine the potential for site contamination and level of exposure risk associated with the project. Based on that information, the project sponsor may be required to conduct soil and/or groundwater sampling and analysis. Where such analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor is required to submit a site mitigation plan (SMP) to DPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP prior to the issuance of any building permit. For departments, boards, commissions and agencies of the City and County of San Francisco that authorize construction or improvements on land under their jurisdiction where no building or grading permit is required, the ordinance requires protocols be developed between that entity and DPH that will achieve the environmental and public health and safety goals of Article 22A.

4.19.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

These thresholds encompass the factors taken into account under NEPA to determine the significance of an action in terms of the context and intensity of its effects. For hazards and hazardous materials, the analysis considers whether the proposed project or alternatives would:

- Locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels;
- Locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes;
- Result in the likely release of hazardous substances that creates a human health or environmental hazard;
- Result in a human health or environmental hazard through the use or disposal of hazardous substances;
- Be located in an airport runway clear zone; or
- Be located at less than the acceptable separation distance from a fire or explosive hazard.

Significance Criteria under CEQA

For hazards and hazardous materials, the CEQA analysis considers whether the proposed project or alternatives would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving fires.

Approach to Analysis

The following analysis considers existing conditions, proposed project plans, and the current regulatory requirements.

- The project site is not located within an airport land use plan or airport runway clear zone, or within the vicinity of a private airstrip; therefore these NEPA and CEQA criteria are not applicable to the proposed project or its alternatives.¹

Proposed Project

Impact HZ-1: Effects Related to Hazardous Materials Emissions or Disposal

NEPA: The proposed project could result in a human health or environmental hazard through the use or disposal of hazardous substances. (Less than Significant with Mitigation)

CEQA: The proposed project could create a significant hazard through routine transport, use, disposal, handling or emission of hazardous materials. (Less than Significant with Mitigation)

Construction

Construction would involve demolition and earthwork activities that would disturb existing building materials and subsurface soils and groundwater. The existing structures could contain hazardous building components, such as asbestos and lead-based paint, which when disturbed could expose workers or the public to adverse effects. In addition, any existing soil or groundwater contamination from past releases of hazardous materials could also expose workers or the public to adverse effects.

Hazardous Building Materials. The existing development was built in 1939 to house wartime ship builders.² At that time, the project site was surrounded by agricultural greenhouses. Landscaping maintenance was once provided by the city but discontinued in 1982.³ As noted above, the existing buildings on the project site are of an age where the use of lead-based paint and asbestos was commonplace. Nevertheless, compliance with the regulations discussed below would ensure that impacts related to asbestos and lead-based paint would be less than significant.

Asbestos. Section 19827.5 of the *California Health and Safety Code* requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through

¹ City/County Association of Governments of San Mateo County, *Comprehensive Land Use Compatibility Plan for the Environs of San Francisco International Airport*, available online: http://www.ccag.ca.gov/pdf/plans-reports/2012/Consolidated_CCAG_ALUCP_10-29-12.pdf, October 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² Van Meter Williams Pollack, *A New Sunnydale; Existing Conditions Analysis*, Draft April 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ *Ibid.*

both inspection and law enforcement, and is to be notified 10 days in advance of any proposed demolition or abatement work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished/alterd including size, age and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The BAAQMD randomly inspects asbestos removal operations. In addition, the BAAQMD will inspect any removal operation when a complaint has been received.

The local office of the CalOSHA must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, the DBI would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

These regulations and procedures, already established as a part of the permit review process, would ensure that any potential impacts due to asbestos-containing building materials would be reduced to a level of insignificance.

Lead-based Paint. Project construction would adhere to the requirements of Section 3426 of the *San Francisco Building Code*, described above. These regulations and procedures in the *Building Code* would ensure that potential impacts of demolition due to lead-based paint would be reduced to a less-than-significant level.

Other Hazardous Building Materials. Generally speaking, most electrical transformers that once contained polychlorinated biphenyls (PCBs) throughout the Bay Area have been removed or replaced with non-PCB containing fluids. Nevertheless, PCBs could still be present within the project area in older electrical equipment. Other hazardous building materials, such as fluorescent light ballasts, could also be present, and could pose health threats for construction workers if not properly disposed of. However, implementation of **Mitigation Measure M-HZ-1, Hazardous Building Materials**, would require that the presence of such materials be evaluated prior to demolition and, if such materials were present, that they be properly handled during removal and building demolition. This would reduce the potential impacts of these hazardous materials to a less-than-significant level.

Contaminated Soil and Groundwater. A review of available environmental databases through the Department of Toxic Substances Control and the State Water Resource Control Board for sites with

documented releases of hazardous materials indicates that no such sites are present within or immediately adjacent to the project site.⁴ A Phase I Environmental Site Assessment (ESA) prepared for the site in April 2010 also reviewed environmental databases and found a total of five sites located within one-half mile of the project site that had documented releases.⁵ However, based on groundwater flow and distances to these sites (all greater than one quarter of a mile away), none were suspected of having a potential for affecting soils at the project site. The Phase I did recommend radon testing prior to construction because one of five samples collected for a USEPA radon survey within the project zip code exceeded the guidance level of 4.0 picocuries/liter of radon in the air.⁶

Regarding asbestos in the soil, surface soils immediately surrounding the structures may contain elevated levels of lead from past scraping of old paint. Asbestos fibers can also be present in serpentinite rock, which contains the fibrous mineral chrysotile, an asbestos mineral. Serpentinite was not encountered during the geotechnical exploration and no veinlets of chrysotile were observed in the bedrock outcrops.⁷

As noted in the Regulatory Framework, the City has adopted an ordinance (incorporated as Article 22A of the *Health Code* and Section 106A.3.2.4 of the *Building Code*) that requires analyzing soil for hazardous wastes within specified areas and on certain specified sites, when over 50 cubic yards of soil is to be disturbed. The project site is not within 150 feet of any elevated freeway, nor is it known to be proximate to an underground storage tank or known to contain hazardous substances in the soil and/or groundwater. Therefore, the proposed project would not likely be subject to Article 22A. Regardless, a Phase II investigation was performed at the project site which consisted of collecting soil samples across the site for laboratory analysis of potential contaminants including petroleum hydrocarbons, volatile organic compounds, and metals.⁸ The findings of the report were compared to existing regulatory screening levels and with the exception of arsenic and vanadium, all analyzed materials were found below screening levels. The concentrations of arsenic and vanadium, however, were above screening but determined to be consistent with background concentrations for the region.⁹ Upon review of this investigation, the San Francisco Department of Public Health (DPH) concurred and no further soil investigations were required at that time.

⁴ Department of Toxic Substances Control, EnviroStor Database and Geotracker Database, http://www.envirostor.dtsc.ca.gov/public/map.asp?global_id=&x=119.1357421875&y=37.82280243352756&z1=5&ms=640,480&mt=m&findaddress=True&city=SAN%20FRANCISCO&zip=&county=&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&corrective_action=true&permit_site=true&permit_and_ca_site=true, accessed July 15, 2010.

⁵ AEW Engineering, Final Phase I Environmental Site Assessment Report, 1654 Sunnydale Avenue, San Francisco California, April 5, 2010. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁶ *Ibid.*

⁷ Engeo Incorporated, Geotechnical Report – Sunnydale – Velasco Redevelopment, April 13, 2009. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ AEW Engineering, Inc. *Final Phase II Environmental Site Assessment Report, 1654 Sunnydale Avenue Site, San Francisco, California*, prepared for Sunnydale Development Co. LLC., June, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E

⁹ *Ibid.*

DPH stated preparation of an SMP would be required, and this plan should include contingency response actions, worker health and safety, stormwater related items, a dust mitigation plan in compliance with the *San Francisco Health Code* Article 22B (added by the Construction Dust Control Ordinance; discussed in Section 4.10, Air Quality) and noise control in compliance with the San Francisco Noise Ordinance. The SMP should also reference protocols and procedures for asbestos containing material and lead-based-paint identification handling and disposal. DPH also stated that a soil vapor radon survey work plan must be submitted to DPH for approval, and then performed, prior to construction-related activities¹⁰

With implementation of **Mitigation Measure M-HZ-2 Site Mitigation Plan and Radon Survey**, construction activities would be able to respond to suspected contamination if encountered and would reduce potential exposure impacts to less than significant levels.

Operation

The proposed project would involve rebuilding the existing residential area with new and renovated structures. Project occupants would likely handle common types of hazardous materials, such as cleaners, disinfectants, and chemical agents required to maintain the sanitation of the residential areas, and community facility areas. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. The proposed new retail businesses to serve the residential population would be required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers who handle hazardous materials, and adequately training workers, if applicable. The project would include a backup diesel-powered generator, which would require storage of diesel fuel. However, the storage of fuel would also be subject to local, state, and federal regulations to ensure the safe handling and storage of diesel fuel. (Emissions from the proposed diesel generator are analyzed in Section 4.10, Air Quality.) For these reasons, hazardous materials used in the proposed project would not pose any substantial public health or safety hazards related to hazardous materials with respect to the surrounding areas.

Conclusion

The impact would be *less than significant with mitigation* under NEPA because the proposed project could result in a human health or environmental hazard through the use or disposal of hazardous substances, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

The impact would be *less-than-significant with mitigation* under CEQA because the proposed project could create a significant hazard through routine transport, use, disposal, handling or emission of hazardous materials, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

¹⁰ San Francisco Department of Public Health, *1654 Sunnydale HOPE Project*, June 17, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Mitigation Measure M-HZ-1: Hazardous Building Materials.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact HZ-2: Effects Related to Release of Hazardous Materials

NEPA: The proposed project could result in the release of hazardous substances that creates a human health or environmental hazard. (Less than Significant with Mitigation)

CEQA: The proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Construction

Construction activities would require the use of certain hazardous materials such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. The use of construction best management practices, typically implemented and required as part of the National Pollution Discharge Elimination System General Construction Permit, described in Section 4.18, Hydrology and Water Quality, would minimize the potential adverse effects from upset and accident conditions.

The overall quantities of these materials on the site at one time would not result in large bulk amounts that, if spilled, could cause a significant adverse affects to human health. Spills of hazardous materials on construction sites are typically localized and are cleaned up in a timely manner. In most cases, the individual construction contractors are responsible for their hazardous materials and are required under their contracts to properly store and dispose of these materials in compliance with state and federal laws. Given the quantities of hazardous materials typically needed for large construction projects and the use of best management practices as required by the individual construction contractors, the threat of exposure to the public or contamination to soil and groundwater from construction-related hazardous materials is considered low. As stated above, **Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey**, would ensure that construction activities would be able to respond to suspected contamination if encountered.

Operation

Once constructed, the proposed project would include the use, storage, and handling of limited quantities of hazardous materials associated with the proposed land uses. For example, residential and community facility uses would require the handling and storage of cleaning agents, solvents, and coatings (such as paint or varnish) for building and site maintenance. These products are labeled to inform users of proper use. The generator would also require storage and handling of diesel fuel which would also be required to be done in accordance with local, state, and federal requirements. Handling and use of these hazardous materials and the disposal of the resulting hazardous wastes would be required to follow the applicable laws and regulations, as described in Regulatory Setting, above. The net result of good compliance would be the reduction of risks and hazards to workers, the public, and the environment including the potential for upset and accident

conditions to levels that are considered acceptable for all hazardous materials that might be anticipated at the project site. Any potential inadvertent releases would likely be localized and with compliance with existing regulations limited in the potential adverse effects to the future residents, visitors, and the environment.

Conclusion

Therefore, the potential impact from accidental release is considered ***less than significant with mitigation*** under NEPA because the proposed project could result in the likely release of hazardous substances that creates a human health or environmental hazard, but the impact would be reduced to a less-than-significant level through adherence to identified mitigation.

The impact is considered ***less than significant with mitigation*** under CEQA because the proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, but the impact would be reduced to a less-than-significant level through adherence to identified mitigation.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact HZ-3: Effects of Hazardous Materials on Schools

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

The McLaren School Early Education School (a prekindergarten program operated by SFUSD) is located within one-quarter of a mile of the project site. The project site would continue to be used as primarily a residential area and would entail limited use of hazardous materials. As discussed above in Impact HZ-1, the proposed project would not include significant hazardous emissions and the use of hazardous materials would be consistent with applicable regulations. Project uses would require the handling and storage of cleaning agents, solvents, and coatings (such as paint or varnish) for building and site maintenance. These products are labeled to inform users of proper use. Relatively small quantities of diesel fuel would also be stored for the generator onsite but would not result in any substantive emissions that could adversely affect any neighboring land uses such as a school. Note that air quality emissions associated with construction, as well as those associated with the proposed project's generator, are analyzed in Section 4.10.

Therefore, impacts related to hazardous emissions to any schools within one-quarter of a mile of the project site would be ***less than significant*** under CEQA.

Mitigation: None required.

Impact HZ-4: Effects Related to Hazardous Materials Sites

NEPA: The proposed project would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes. (Less than Significant)

CEQA: The proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (No Impact)

As noted above in Impact HZ-1, the project site is not located on any of the available databases pursuant to *Government Code* Section 65962.5 and that no such sites are present immediately adjacent to the project site.¹¹ The Phase I ESA prepared for the site in April 2010 also reviewed environmental databases and found no sites that were suspected of having a potential for affecting soils at the project site.¹²

The impact would be *less than significant* under NEPA because the proposed project would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes.

There would be *no impact* under CEQA because the proposed project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Mitigation: None required.

Impact HZ-5: Effects on Emergency/Evacuation Plans

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

Reconstruction of the project site would be required to conform to the provisions of the *San Francisco Building Code* and *Fire Code*. Any potential alterations to the existing street network would have to meet the requirements of the San Francisco Fire Department (SFFD), San Francisco Public Utilities Commission (SFPUC), San Francisco Department of Public Works (SFPD) and the Municipal Transportation Agency's Division of Parking & Traffic (DPT). (Fire Department

¹¹ Department of Toxic Substances Control, 2010, *op cit.*

¹² AEW Engineering, 2010, *op cit.*

emergency vehicle access is discussed in Section 4.8, Transportation, under Impact TR-5.) The proposed project would realign Blythedale Avenue to connect with Sunrise Way, realign Brookdale Avenue to intersect Sunnydale Avenue, and add additional north-south cross streets. These changes would facilitate movement through, and improve access to, the interior of the project site.

Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and the impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact HZ-6: Effects Related to Fires or Explosive Hazards

NEPA: The proposed project would be located at an acceptable separation distance from a fire or explosive hazard. (Less than Significant)

CEQA: The proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans would be reviewed by the SFFD (as well as the DBI) to ensure conformance with these provisions. The proposed project would conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards at the project site would be addressed during the permit review process.

The proposed project site is located adjacent to the Gleneagles golf course, McLaren Park, Herz Playground, and residential neighborhoods that generally do not handle substantial quantities of hazardous materials. According to records of registered above ground storage tanks (AST), the nearest AST to the project site is approximately half-a-mile away. Using the HUD Acceptable Separation Distance calculator, this 2,500 gallon fuel tank has an acceptable separation distance of 405 feet for thermal radiation protection and 77 feet for buildings. Given the project site is approximately half-a-mile (2,640 feet) from the tank, the site is safely beyond these acceptable separation distances of the tank.¹³

This impact would be *less than significant* under NEPA because the proposed project would be located at an acceptable separation distance from a fire or explosive hazard.

The impact would be *less than significant* under CEQA because the proposed project would not expose people or structures to a significant risk of loss, injury or death involving fires.

¹³ Housing and Urban Development, Acceptable Separation Distance (ASD) Electronic Assessment Tool, <http://www.hud.gov/offices/cpd/environment/asdcalculator.cfm>, accessed April 10, 2013.

Mitigation: None required.

Proposed Project Variant

Under the project variant, the building envelopes would be the same; therefore the hazards and hazardous materials analysis would be the same as for the proposed project. Under both NEPA and CEQA, impacts would be *less than significant with mitigation* with implementation of **Mitigation Measure M-HZ-1, Hazardous Building Materials** and **Mitigation Measure M-HZ-2, Site Mitigation Plan and Radon Survey**.

Alternative A: Reduced Development / Density Alternative

Impact A-HZ-1: Effects Related to Hazardous Materials Emissions or Disposal

NEPA: The Reduced Development / Density Alternative could result in a human health or environmental hazard through the use or disposal of hazardous substances. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less than Significant with Mitigation)

The Reduced Development / Density Alternative would also involve rebuilding the existing residential area with new and renovated structures. Construction under the alternative would involve demolition and earthwork activities to the same depth as the proposed project, and it would disturb existing building materials and subsurface soils and groundwater that could contain hazardous building components. In addition, any existing soil or groundwater contamination from past releases of hazardous materials could also expose workers or the public to adverse effects. Implementation of **Mitigation Measure M-HZ-1, Hazardous Building Materials** and **Mitigation Measure M-HZ-2 Site Mitigation Plan and Radon Survey** would reduce impacts from construction to a less-than-significant level because workers would be able to respond to suspected contamination if encountered and would reduce potential exposure.

Regarding operations, project occupants would similarly handle common types of hazardous materials, such as cleaners, disinfectants, and chemical agents required to maintain the sanitation of the residential areas, and community facility areas although to a lesser extent than the proposed project. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. The proposed new retail businesses to serve the residential population would be required by law to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers who handle hazardous materials, and adequately training workers, if applicable. The alternative would include a backup generator, which would require storage of diesel fuel subject to regulations that would ensure safe handling. For these reasons, hazardous materials used in the Reduced

Development / Density Alternative would not pose substantial public health or safety hazards related to hazardous materials with respect to the surrounding areas.

The impact would be *less than significant with mitigation* under NEPA because the Reduced Development / Density Alternative could result in a human health or environmental hazard through the use or disposal of hazardous substances, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

The impact would be *less than significant with mitigation* under CEQA because the Reduced Development / Density Alternative could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

Mitigation Measure M-HZ-1: Hazardous Building Materials.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact A-HZ-2: Effects Related to Release of Hazardous Materials

NEPA: The Reduced Development / Density Alternative could result in the release of hazardous substances that creates a human health or environmental hazard. (Less than Significant with Mitigation)

CEQA: The Reduced Development / Density Alternative could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Construction activities for the Reduced Development / Density Alternative would require the use of certain hazardous materials such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. The use of construction best management practices typically implemented and required as part of the National Pollution Discharge Elimination System General Construction Permit (see Section 4.18, Hydrology and Water Quality) would minimize the potential adverse effects from upset and accident conditions.

Given the quantities of hazardous materials typically needed for large construction projects and the use of best management practices as required by the individual construction contractors, the threat of exposure to the public or contamination to soil and groundwater from construction-related hazardous materials is considered low. As stated above, **Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey** would ensure that construction activities would be able to respond to suspected contamination if encountered.

Under operations, similar to the proposed project, the Reduced Development / Density Alternative would include the use, storage, and handling of limited quantities of hazardous

materials associated with the proposed land uses, including the residential, commercial, and community facility use of cleaning agents, solvents. The generator would also require storage and handling of diesel fuel which would also be done in accordance with local, state, and federal requirements. Any potential inadvertent releases would likely be localized and with compliance with existing regulations limited in the potential adverse effects to the future residents, visitors, and the environment.

Therefore, the potential impact from accidental release is considered *less than significant with mitigation* under NEPA because the Reduced Development / Density Alternative could result in the likely release of hazardous substances that creates a human health or environmental hazard, but the impact would be reduced to a less-than-significant level through adherence to identified mitigation.

The impact would be *less than significant with mitigation* under CEQA because the Reduced Development / Density Alternative would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, but the impact would be reduced to a less-than-significant level through adherence to identified mitigation.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact A-HZ-3: Effects of Hazardous Materials on Schools

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

As discussed above, the Reduced Development / Density Alternative would not include any significant hazardous emissions and the use of hazardous materials would be consistent with applicable regulations. The alternative would require the handling and storage of cleaning agents, solvents, and coatings (such as paint or varnish) for building and site maintenance. These products are labeled to inform users of proper use. Relatively small quantities of diesel fuel would also be stored for the generator onsite but would not result in any substantive emissions that could adversely affect any neighboring land uses such as a school.

Therefore, the Reduced Development / Density Alternative would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and the impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact A-HZ-4: Effects Related to Hazardous Materials Sites

NEPA: The Reduced Development / Density Alternative would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (No Impact)

As noted above for the proposed project, the project site is not located on any of the available databases pursuant to *Government Code* Section 65962.5 and no such sites are present immediately adjacent to the project site.¹⁴

The impact for the Reduced Development / Density Alternative is therefore considered to be *less than significant* under NEPA because the alternative would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes.

There would be *no impact* under CEQA because the Reduced Development / Density Alternative would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Mitigation: None required.

Impact A-HZ-5: Effects on Emergency/Evacuation Plans

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

Construction under the Reduced Development / Density Alternative would also be required to conform to the provisions of the *San Francisco Building Code* and *Fire Code*. Any potential alterations to the existing street network would have to meet SFFD, SFPUC, SFDPW and the DPT.

¹⁴ Department of Toxic Substances Control, 2010, op cit.

The alternative would include street realignment and new north-south cross streets within the project site, which would improve site access compared to existing conditions.

Therefore, the Reduced Development / Density Alternative would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and the impact would be *less than significant* under CEQA.

Mitigation: None required.

Impact A-HZ-6: Effects Related to Fires and Explosive Hazards

NEPA: The Reduced Development / Density Alternative would be located at an acceptable separation distance from a fire or explosive hazard. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans would be reviewed by the SFFD (as well as the DBI) to ensure conformance with these provisions. The Reduced Development / Density Alternative would conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards would be addressed during the permit review process. According to AST records for the City, the closest AST is located well beyond the minimum acceptable distance for HUD requirements in case of explosion.

This impact would be *less than significant* under NEPA because the Reduced Development / Density Alternative would be located at an acceptable separation distance from a fire or explosive hazard.

This impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not expose people or structures to a significant risk of loss, injury or death involving fires.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-HZ-1: Effects Related to Hazardous Materials Emissions or Disposal

NEPA: The One-for-One Replacement Alternative could result in a human health or environmental hazard through the use or disposal of hazardous substances. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (Less than Significant with Mitigation)

The One-for-One Replacement Alternative would also involve rebuilding the existing residential area with new and renovated structures. Construction under the alternative would involve demolition, as well as and earthwork activities to the to a lesser depth than the proposed project or Alternative A. This alternative would also disturb existing building materials and subsurface soils and groundwater that could contain hazardous building components. In addition, any existing soil or groundwater contamination from past releases of hazardous materials could also expose workers or the public to adverse effects. Implementation of **Mitigation Measure M-HZ-1, Hazardous Building Materials** and **Mitigation Measure M-HZ-2, Site Mitigation Plan and Radon Survey** would reduce impacts from construction to a less-than-significant level.

Hazardous materials used in the One-for-One Replacement Alternative would not pose any substantial public health or safety hazards related to hazardous materials with respect to the surrounding areas. Given the One-for-One Replacement Alternative would require less construction than both the proposed project and Reduced Development / Density Alternative, the One-for-One Replacement Alternative would require the use of fewer hazardous materials during construction.

The impact would be *less than significant with mitigation* under NEPA because the One-for-One Replacement Alternative could result in a human health or environmental hazard through the use or disposal of hazardous substances, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures. No new sources of hazardous materials would be expected.

The impact would be *less than significant with mitigation* under CEQA because the One-for-One Replacement Alternative could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

Mitigation Measure M-HZ-1: Hazardous Building Materials.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact B-HZ-2: Effects Related to Release of Hazardous Materials

NEPA: The One-for-One Replacement Alternative could result in the release of hazardous substances that creates a human health or environmental hazard. (Less than Significant with Mitigation)

CEQA: The One-for-One Replacement Alternative could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

Construction activities for the One-for-One Replacement Alternative would require the use of certain hazardous materials, although to a lesser extent than both the proposed project and the Reduced Development / Density Alternative. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. The use of construction best management practices typically implemented and required as part of the National Pollution Discharge Elimination System General Construction Permit, would minimize the potential adverse effects from upset and accident conditions. As stated above, **Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey**, would ensure that construction activities would be able to respond to suspected contamination if encountered.

Once constructed, the One-for-One Replacement Alternative would include the use, storage, and handling of limited quantities of hazardous materials associated with the proposed land uses—including the aforementioned solvents, greases, and cleaning agents—although to a lesser extent than the proposed project and the Reduced Development / Density Alternative. The total amount of these materials would be approximately the same as under existing conditions, given that the alternative would have the same number of units as under existing conditions. Any potential inadvertent releases would likely be localized and with compliance with existing regulations limited in the potential adverse effects to the future residents, visitors, and the environment.

This impact would be a *less than significant with mitigation* under NEPA because the One-for-One Replacement Alternative would not result in the likely release of hazardous substances that creates a human health or environmental hazard, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

This impact would be a *less than significant with mitigation* impact under CEQA because the One-for-One Replacement Alternative would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, but the impact would be reduced to a less-than-significant level through implementation of identified mitigation measures.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

Impact B-HZ-3: Effects of Hazardous Materials on Schools

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)

The project site would continue to be used as primarily a residential area and would entail limited use of hazardous materials (lesser than the proposed project or Alternative A, discussed above). It would not result in any significant hazardous emissions and the use of hazardous materials would be consistent with applicable regulations.

Therefore, impacts related to hazardous emissions to any schools within one-quarter of a mile of the project site would be *less than significant* under CEQA.

Mitigation: None required.

Impact B-HZ-4: Effects Related to Hazardous Materials Sites

NEPA: The One-for-One Replacement Alternative would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (No Impact)

As noted above for the proposed project, the project site is not located on any of the available databases pursuant to *Government Code* Section 65962.5 and that no such sites are present immediately adjacent to the project site.¹⁵

The impact for the One-for-One Replacement Alternative is therefore considered to be *less than significant* under NEPA because the alternative would not locate an occupied structure on filled land that contains toxic chemicals or radioactive materials at concentrations that would result in exposures above U.S. EPA acceptable risk levels, nor would it locate occupied structures on or near a site which could pose potential environmental hazards, such as dumps, landfills, or industrial locations that might contain hazardous wastes.

¹⁵ Department of Toxic Substances Control, 2010, *op cit*.

There would be *no impact* under CEQA the alternative would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code* Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.

Mitigation: None required.

Impact B-HZ-5: Effects on Emergency/Evacuation Plans

NEPA: This topic is not covered under NEPA.

CEQA: The One-for-One Replacement Alternative would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans would be reviewed by the SFFD (as well as the DBI) to ensure conformance with these provisions. The One-for-One Replacement Alternative would conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards would be addressed during the permit review process. The alternative would include site grading. However, the overall street network, and location of building pads, would be similar to under existing conditions. As such, access to and through the project site would remain as under existing conditions. It would not be improved as it would under both the proposed project and the Reduced Development / Density Alternative.

This impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Mitigation: None required.

Impact B-HZ-6: Effects Related to Fires and Explosive Hazards

NEPA: The One-for-One Replacement Alternative would be located at an acceptable separation distance from a fire or explosive hazard. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. In addition, the final building plans would be reviewed by the San Francisco Fire Department (as well as the DBI) to ensure conformance with these provisions. The One-for-One Replacement

Alternative would conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan. In this way, potential fire hazards would be addressed during the permit review process. According to AST records for the City, the closest AST is located well beyond the minimum acceptable distance for HUD requirements in case of explosion.

This impact would be *less than significant* under NEPA because the One-for-One Replacement Alternative would be located at an acceptable separation distance from a fire or explosive hazard.

The impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not expose people or structures to a significant risk of loss, injury or death involving fires.

Mitigation: None required.

Alternative C: No Action Alternative

The No Action Alternative would overall have a *less than significant* impact under both CEQA and NEPA related to hazardous materials and could even have a reduced potential due to the fact that existing structures with potential hazardous building materials would not be disturbed. However, assuming that some hazardous materials are present, the proposed project and alternatives would ultimately reduce existing potential hazards associated with hazardous building materials by removing potential hazardous materials from inadvertent releases in the future.

4.19.3 Cumulative Impacts

Impact CC-HZ: Cumulative Hazards and Hazardous Materials Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative hazards or hazardous materials impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative hazards or hazardous materials impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

The geographic context for cumulative hazards effects includes the portions of San Francisco and San Mateo counties in close proximity to the project site, although in general the impacts associated with hazardous materials tends to be more site-specific related to isolated incidences which are not likely to combine or become cumulatively considerable unless under very unusual circumstances.

Cumulative development projects described in the “Project Setting” would be required to follow applicable regulations for hazardous materials disposal during demolition and construction, and project operations would use proportionally similar amounts and types of hazardous materials as the proposed project. Any accidental spill or release of the materials would not combine with the proposed project to create significant hazards or hazardous materials impacts and would be subject to the same regulatory requirements as discussed above for the proposed project.

The project alternatives would similarly have a negligible contribution to cumulative impacts associated with hazardous materials use as the proposed land use and associated hazardous materials use would be relatively equivalent to the proposed project.

The impact would be *less than significant* under NEPA because the proposed project, variant, or Alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative hazards or hazardous materials impacts.

The impact would be *less than significant* under CEQA because the proposed project, variant, or alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative hazards or hazardous materials impacts.

4.19.4 Mitigation Measures

Mitigation Measure M-HZ-1: Hazardous Building Materials.

The project sponsor shall ensure that PCB-containing equipment, such as fluorescent light ballasts and other potentially hazardous building materials, are removed and properly disposed of prior to the start of demolition. Old light ballasts that would be removed during demolition would be evaluated for the presence of PCBs. In the case where the presence of PCBs in the light ballast could not be verified, then they would be assumed to contain PCBs and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous materials identified either before or during demolition would be abated according to federal, state, and local laws and regulation.

Mitigation Measure M-HZ-2: Site Mitigation Plan and Radon Survey.

The project sponsor shall retain a qualified environmental consulting firm to prepare a Site Mitigation Plan (SMP) to address the possible discovery of unexpected contaminants during construction. The SMP shall specify procedures to follow upon discovery of suspect soils and include appropriate notification, handling, and disposal protocols. The SMP shall also include contingency response actions, worker health and safety protocols, stormwater protection measures, dust mitigation in accordance with San Francisco Health Code Article 22B, and noise control in accordance with San Francisco Noise Ordinance.

The project sponsor shall also prepare work plan describing procedures for the completion of a radon soil vapor survey to be conducted prior to construction.

The SMP and radon soil survey work plan shall be submitted to the San Francisco Department of Public Health for review and approval prior to commencement of construction activities.

4.20 Mineral and Energy Resources

4.20.1 Regulatory Framework

Federal

National Energy Conservation Policy Act

The National Energy Conservation Policy Act serves as the underlying authority for federal energy management goals and requirements. Signed into law in 1978, it has been regularly updated and amended by subsequent laws and regulations. This act is the foundation of most federal energy requirements.

National Energy Policy Act of 2005

The National Energy Policy Act of 2005 sets equipment energy efficiency standards and seeks to reduce reliance on nonrenewable energy resources and provide incentives to reduce current demand on these resources. For example, under the act, consumers and businesses can attain federal tax credits for purchasing fuel-efficient appliances and products, including hybrid vehicles; constructing energy-efficient buildings; and improving the energy efficiency of commercial buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

Executive Order 13423 (Strengthening Federal Environmental, Energy, and Transportation Management), signed in 2007, strengthens the key energy management goals for the federal government and sets more challenging goals than the Energy Policy Act of 2005. The energy reduction and environmental performance requirements of Executive Order 13423 were expanded upon in Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance), signed in 2009.

Energy and Independence Security Act of 2007 and Corporate Average Fuel Economy Standards

The Energy and Independence Security Act of 2007 sets federal energy management requirements in several areas, including energy reduction goals for federal buildings, facility management and benchmarking, performance and standards for new buildings and major renovations, high-performance buildings, energy savings performance contracts, metering, energy-efficient product procurement, and reduction in petroleum use and increase in alternative fuel use. This act also amends portions of the National Energy Policy Conservation Act.

State

2008 California Energy Action Plan Update

The 2008 *Energy Action Plan Update* provides a status update to the 2005 *Energy Action Plan II*, which is the State of California's principal energy planning and policy document.¹ The plan continues the goals of the original *Energy Action Plan*, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are energy efficiency, demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure), and the use of renewable sources of power. If that these actions are unable to satisfy the increasing energy and capacity needs, the plan supports clean and efficient fossil-fired generation.

California Green Building Standards Code

The 2013 *California Green Building Standards Code*, as specified in Title 24, Part 11 of the *California Code of Regulations*, specifies building standards to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The provisions of this code apply to the planning, design, operation, construction, replacement, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

Building Energy Efficiency Standards

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the *California Code of Regulations*, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The California Energy Commission adopted an update in 2013, and these new standards become effective on July 1, 2014. California's building energy efficiency standards (along with those for energy-efficient appliances) have saved more than \$56 billion in electricity and natural gas costs since 1978, and it is estimated that the standards will save an additional \$23 billion by 2013.²

¹ California Public Utilities Commission and California Energy Commission, "2008 Update, Energy Action Plan," February 2008. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

² California Energy Commission, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, available online at [http://www.energy.ca.gov/title 24/](http://www.energy.ca.gov/title%2024/), accessed May 4, 2011. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Senate Bill 1078 and 107 and Executive Order S-14-08 and S-21-09

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the ARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (found in Chapter 9, Division 2, Section 2710 et seq. of the *Public Resources Code*) requires the State Mining and Geology Board to adopt state policies for the reclamation of mined lands and the conservation of mineral resources. These policies are found in Title 24 of the *California Code of Regulations*, Division 2, Chapter 8, Subchapter 1.

In accordance with SMARA, the State has established the California Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels.

Local

Sustainability Plan for City and County San Francisco

The *Sustainability Plan for City and County San Francisco*, adopted in 1997, contains a set of general goals and specific objectives and actions for San Francisco to ensure that the city's current energy needs are met without sacrificing the ability of future generations to meet their own needs. The major energy goals expressed in the plan are to reduce overall power use by maximizing energy efficiency; to maintain an energy supply based on renewable, environmentally sound resources; to eliminate climate-changing and ozone-depleting emissions and toxic contaminants associated with energy production and use; and to base energy decisions on the goal of creating a sustainable society.

Electricity Resource Plan

The *Electricity Resource Plan* for San Francisco presents an action plan to meet the growth in demand for electricity, as well as to allow the shutdown of the Hunters Point power plant and replacement of the aging power plants at Potrero. The main components of the plan include demand reduction through energy efficiency and load management; use of renewable energy resources; construction of medium-sized generation plants using the most efficient gas-fired generators and cogeneration plants; construction of small-scale distributed generation, such as

fuel cells, package cogeneration plants, and micro-turbines; and improved power transmission from the San Francisco Peninsula. The plan calls for a renewed commitment and an accelerated pace to achieving the goals of the 1997 Sustainability Plan, including the elimination of all fossil-fuel power; an energy supply based on renewable, environmentally sound resources; and maximum energy efficiency. The *Electricity Resource Plan* identifies specific energy savings and production goals for each component of the plan.

San Francisco Green Building Code

The purpose of the *San Francisco Green Building Code* is to promote the health, safety and welfare of San Francisco residents, workers, and visitors by minimizing the use and waste of energy, water and other resources in the construction and operation of the CCSF's building stock and by providing a healthy indoor environment. Under the *Green Building Code*, residential buildings must achieve either LEED® Silver certification or, if using the GreenPoint rating system, attain at least 75 rating points; additional points are required under each system when existing building(s) are being demolished. Each system requires, at a minimum, compliance with California Building Code energy efficiency standards, and additional points may be attained by exceeding the state standards. Non-residential buildings are subject to different, but comparable, requirements, including a provision that large commercial buildings either generate renewable energy on-site or exceed the state energy efficiency standards. Other provisions address efficiency in indoor and outdoor water use, stormwater runoff, solid waste reduction, use of low-emitting paints and building materials, and parking, including bicycle parking, among other provisions. This ordinance combines the mandatory elements of the 2013 *California Green Building Standards Code* with stricter local requirements.

San Francisco Water Efficient Landscaping Ordinance

The San Francisco Water Efficient Landscaping Ordinance (codified in the *San Francisco Administrative Code*, Chapter 63) establishes a framework for planning, designing, installing, maintaining, and managing water-efficient landscaping in new construction and rehabilitation projects. The ordinance encourages the use of climate-appropriate and local California native species, and establishes provisions for water management and the prevention of wasteful use of water in landscapes. To ensure that water is used efficiently without waste, the ordinance sets a Maximum Applied Water Allowance, using state mandated formulas and accounting for local climatic conditions, and this allowance may not be exceed unless the landscaped area is irrigated with gray water or harvested rain water. Under this ordinance, turf areas may not exceed 25 percent of the total landscaped area or be installed on steep slopes.

The San Francisco Water Efficient Landscaping Ordinance applies to these three tiers of projects:

- (1) Tier 1: All public agency, residential, and commercial new construction landscape projects and rehabilitated landscape projects with a modified landscape area equal to or greater than 1,000 square feet and less than 2,500 square feet
- (2) Tier 2: All public agency, residential and commercial new construction and rehabilitated landscape projects with a modified landscape area equal to or greater than 2,500 square feet

- (3) The irrigation and maintenance of any landscape irrigation system in the City and County of San Francisco

For Tier 1 and 2 projects, applicants must submit landscape documentation to the SFPUC. For Tier 1 projects, the package must include a description of the proposed landscape project, the selection of low-water-use or climate-appropriate plants, water-efficient irrigation system components, and other applicable project information. For Tier 2 projects, the required documentation includes a landscape plan, irrigation plan, soil management report, grading plan, and calculation of the Maximum Applied Water Allowance. For other projects, the applicant may submit a compliance plan that includes a programmatic approach to compliance with the ordinance. Upon completion of the landscape project, Tier 1 and 2 projects must also submit a Certificate of Landscape Completion for review and approval by the SFPUC, and a certificate of occupancy cannot be issued until this certification is approved. Audits for compliance with the Maximum Allowable Water Allowance may be required by the SFPUC.

The SFPUC may waive some or all of the requirements of this ordinance if, based on a site inspection, the SFPUC determines that compliance is not feasible. This ordinance complies with the requirements of Article 10.8 of the *California Government Code*, enacted by the State as the Water Conservation in Landscaping Act.

San Francisco Green Landscaping Ordinance

The San Francisco Green Landscaping Ordinance amends the *San Francisco Planning Code* and *Public Works Code* to enhance new development and substantial alterations of existing buildings. The goals of the ordinance are to:

- Promote healthier and more plentiful plantings through screening, parking lot, and street tree controls
- Increase permeability through front yard and parking lot controls
- Encourage responsible water use through increasing “climate appropriate” plantings
- Improve screening by creating an ornamental fencing requirement and requiring screening for newly defined vehicle use areas.

Climate-appropriate plants are defined in Section 802.1 of the *San Francisco Public Works Code* and Section 63.3 of the *San Francisco Administrative Code* (the San Francisco Water Efficient Landscaping Ordinance) and include those that are defined as “low” or “very low” use by the California Department of Water Resources; are defined as “no water,” “little water,” or “little to moderate water for San Francisco according to the Sunset Western Addition Garden Book; function as part of an engineered stormwater management feature approved by the SFPUC; are classified as low water use by San Francisco’s Department of Public Works, Recreation and Parks District, or the SFPUC; appear in the “San Francisco Street Tree Species List” established by the Department of Public Works; are undergoing testing by the Department of Public Works or the Recreation and Parks Department; or have been approved for a specific wet soil location by the Department of Public Works or SFPUC based on naturally occurring water sources.

4.20.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

HUD guidance states that the opportunities for energy efficiency should be considered when evaluation environmental effects. The specific criterion used to evaluate the project's effect on energy resources is as follows:

- Incorporate insufficient energy efficiency measures or result in energy consumption requiring a significant increase in energy production for the energy provider.

Significance Criteria under CEQA

The proposed project would result in a significant impact related to mineral and energy resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; or
- Encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.

Proposed Project

Impact ME-1: Effects on Known Mineral Resources

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (No Impact)

The project site is mapped by the California Geologic Survey as either MRZ-1 or MRZ-4, indicating that substantial mineral resources do not occur at the site.³ Therefore, construction and operation of the proposed Sunnydale-Velasco HOPE-SF Master Plan project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Therefore, there would be *no impact* under CEQA because the proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

³ California Department of Conservation, Division of Mines and Geology, "Update of Mineral Land Classification: Aggregate Minerals in the South San Francisco Bay Production-Consumption Region," DMG Open-File Report 96-03, 1996. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Mitigation: None required.

Impact ME-2: Effects on Mineral Resource Recovery Sites

NEPA: This topic is not covered under NEPA.

CEQA: The proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (No Impact)

There are no mineral resources identified at the project site. It is not an important mineral resource recovery site. The *San Francisco General Plan* does not identify any areas of important mineral resources in San Francisco.

Therefore, there would be *no impact* under CEQA because the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Mitigation: None required.

Impact ME-3: Effects on Natural Resource Consumption

NEPA: The project would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider. (Less than Significant)

CEQA: The proposed project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner. (Less than Significant)

The proposed project would include construction of new residential units, community facility space, convenience retail, open space, and parking facilities. Development of these uses would consume energy, but these uses would not result in the use of large amounts of fuel, water, or energy in the context of energy use throughout the City and region. According to HUD, the average multi-family household unit consumes 64.14 million BTUs annually, and single-family dwellings consume an average of 106.58 million BTUs, nationwide.⁴ Therefore, the project's multi-family residential buildings would consume less energy than the same number of units constructed in detached housing.

The project demand would be typical for a development of this scope and nature and would comply with current State and local codes concerning energy consumption, including Title 24 of the *California Code of Regulations* enforced by the Department of Building Inspection. The project sponsors are seeking Leadership in Energy and Environmental Design-Neighborhood Design

⁴ United States Department of Housing and Urban Development (HUD), *Evidence Matters* Newsletter, Summer 2011, available online: http://www.huduser.org/portal/periodicals/em/EM_Newsletter_Summer_2011_FNL.pdf. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

(LEED-ND) certification, which would reduce energy demand compared to traditional developments through building materials and fixtures selection, environmental systems design, and construction efficiency measures.

The project site is served by existing utility systems, and it would not require a major expansion of power facilities. As stated in Section 4.14, the project would be served by adequate water supplies. In addition, the project site is located in a developed urban area. The area is served by the San Francisco Municipal Transportation Agency lines along Sunnydale Avenue and Santos Street. Use of this transit system by project residents and visitors would reduce the amount of energy expended in private automobiles.

Therefore, the energy demand associated with the proposed project would result in a *less-than-significant* impact under NEPA because the project would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider.

Therefore, the project would result in a *less than significant* impact under CEQA because the project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.

Mitigation: None required.

Proposed Project Variant

The project variant would occur in the same location as the proposed project. Therefore, it would not result in the loss of availability of a locally important mineral resource recovery site at the regional or local level. There would be *no impact* to mineral resources under CEQA. Moreover, the project variant would result in fewer total units than the proposed project, which would result in an associated reduction in resource demand as compared to the less-than-significant resource demand of the proposed project. Impacts to energy would be *less than significant* under NEPA, and impacts to fuel, water, or energy resources would be *less than significant* under CEQA.

Alternative A: Reduced Development / Density Alternative

Impact A-ME-1: Effects on Known Mineral Resources

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (No Impact)

The Reduced Development / Density Alternative would occur in the same location as the proposed project. Therefore, it would not result in the loss of availability of a locally important mineral resource recovery site.

There would be *no impact* under CEQA because the Reduced Development / Density Alternative would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Mitigation: None required.

Impact A-ME-2: Effects on Mineral Resource Recovery Sites

NEPA: This topic is not covered under NEPA.

CEQA: The Reduced Development / Density Alternative would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (No Impact)

The Reduced Development / Density Alternative would occur in the same location as the proposed project. Therefore, it would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

There would be *no impact* under CEQA because the Reduced Development / Density Alternative would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Mitigation: None required.

Impact A-ME-3: Effects on Natural Resource Consumption

NEPA: The Reduced Development / Density Alternative would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider. (Less than Significant)

CEQA: The Reduced Development / Density Alternative would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner. (Less than Significant)

The Reduced Development / Density Alternative would result in fewer total units than the proposed project. A lower total number of units would result in a lower total demand for water, fuel, and energy resources as compared to the less-than-significant demands of the proposed project.

The impact would be *less than significant* under NEPA because the Reduced Development / Density Alternative would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider.

The impact would be *less than significant* under CEQA because the Reduced Development / Density Alternative would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.

Mitigation: None required.

Alternative B: One-for-One Replacement Alternative

Impact B-ME-1: Effects on Known Mineral Resources

NEPA: This topic is not covered under NEPA.

The One-for-One Replacement Alternative would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (No Impact)

The One-for-One Replacement Alternative would occur in the same geographic extent as the proposed project. The alternative would not result in the loss of availability of a locally important mineral resource recovery site.

There would be *no impact* under CEQA because the One-for-One Replacement Alternative would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Mitigation: None required.

Impact B-ME-2: Effects on Mineral Resource Recovery Sites

NEPA: This topic is not covered under NEPA.

The One-for-One Replacement Alternative would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (No Impact)

The One-for-One Replacement Alternative would occur in the same location as the proposed project, and this location is not designated as a resource recovery site by local plans.

There would be *no impact* under CEQA because the One-for-One Replacement Alternative would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Mitigation: None required.

Impact B-ME-3: Effects on Natural Resource Consumption

NEPA: The One-for-One Replacement Alternative would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider. (Less than Significant)

CEQA: The One-for-One Replacement Alternative would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner. (Less than Significant)

The One-for-One Replacement Alternative would result in the same number of units as under existing conditions. These units would likely generate less overall demand for water, energy, and fuel than the existing buildings due to the increased efficiency associated with contemporary building standards. Due to the alternative's lower unit count than that of other alternatives, it would also generate less demand for these resources than other alternatives. The One-for-One Replacement alternative would not use water, fuel, and energy resources in a wasteful manner.

The impact would be *less than significant* under NEPA because The One-for-One Replacement Alternative would incorporate sufficient energy efficiency measures and would not result in energy consumption requiring a significant increase in energy production for the energy provider.

The impact would be *less than significant* under CEQA because the One-for-One Replacement Alternative would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use these resources in a wasteful manner.

Mitigation: None required.

Alternative C: No Action Alternative

The No Action Alternative would result in no change at the project site. As stated above, the project site is not a statewide-, regionally-, or locally-designated mineral recovery site, so there would be no impacts to mineral resources. Regarding other resources, the No Action Alternative would result in continued demand for water, fuel, and energy at the same level as under existing conditions. There would be *no impact* under NEPA and *no impact* under CEQA.

4.20.3 Cumulative Impacts

Impact CC-ME: Cumulative Effects on Minerals and Energy

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative energy impacts. (Less than Significant)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative mineral and energy resource impacts. (Less than Significant)

Proposed Project, Variant, and Alternatives A and B

As stated above, the project site is not designated as a statewide-, regionally-, or locally-important mineral resource recovery site, and the project and its alternative would result in no impact to mineral resources. Therefore, there would be no cumulative impact to mineral resources.

The project and its alternatives would use fuel, energy, and water. Although many projects in the region would also use these resources, cumulative impacts would be less than significant because the project and all of the regional projects would be required to comply with the *California Green Building Standards Code* at a minimum and would also be subject to local green building ordinances, which must be as stringent as the state requirements and are often more stringent. Because these building codes encourage sustainable construction practices related to planning and design, energy efficiency, and water efficiency and conservation, energy consumption would be expected to be reduced compared to existing conditions as result of implementation of the projects.

Therefore, cumulative impacts related to wasteful use of energy resources would be *less than significant* under NEPA because the proposed project, variant, or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative energy impacts.

Cumulative impacts would be *less than significant* under CEQA because the proposed project, variant, or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative mineral and energy impacts.

4.21 Agricultural and Forest Resources

4.21.1 Regulatory Framework

Federal

Farmland Protection Policy Act (FPPA)

The FPPA is intended to minimize the impact that federal projects have on unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that if possible, federal programs are administered to be compatible with state and local policies and programs to protect farmland.

For the purposes of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. However, under *Code of Federal Regulations* Title 7, Section 685, for the purposes of FPPA, “farmland” does not include land already in or committed to urban development or water storage. Farmland “already in” urban includes lands identified as “urbanized area” on the U.S. Census Bureau Map, as urban area mapped with a “tint overprint” on the USGS topographical maps, or as “urban built up area” on the USDA Important Farmland Maps.

State

The California Land Conservation Act of 1965

The California Land Conservation Act of 1965, also known as the Williamson Act,¹ is a voluntary tax incentive program for preserving agricultural land and open space. A ten-year contract is entered into by the county and the property owner. The county places restrictions on the use of the land, thereby guaranteeing that it will remain as agricultural use or open space. In return, the property owner is guaranteed that the property will be taxed according to the income it can generate from agriculture or other compatible uses, instead of its full market value.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program provides an analysis of agricultural land use and land use changes throughout California. The program provides agricultural use conversion information for decision makers to use in their planning for present and future uses of California’s agricultural land resources. This program includes preparation of bi-annual “Important Farmland Maps” that designate Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

¹ California Department of Conservation, Williamson Act Maps, Division of Land Resource Protection, available online: <http://ftp.consrv.ca.gov/pub/dlrp/wa/>, accessed February 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

Public Resources Code Section 12220(g)

The *California Public Resources Code* defines forest land as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.”

Public Resources Code Section 4526

This section of the *California Public Resources Code* states, “‘Timberland’ means land, other than land owned by the federal government and land designated by the [State Board of Forestry and Fire Protection] as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.”

4.21.2 Impacts

Context and Intensity Evaluation Guidelines under NEPA

The Farmland Protection Policy Act discourages Federal activities that would convert farmland to nonagricultural purposes. Prime and important farmland includes all land that is defined as prime, unique, or farmlands of statewide or local importance. In addition, HUD guidance states that the suitability of soils for farmland or forestry use should be considered when evaluating environmental effects. The specific criteria used to evaluate the project’s effect on agricultural resources, are as follows:

- Contribute to the unnecessary conversion of prime and important farmland to nonagricultural uses; and
- Significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.

Significance Criteria under CEQA

Implementation of the project would have a significant effect on agricultural and forest resources if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in *Public Resources Code* Section 12220(g)) or timberland (as defined by *Public Resources Code* Section 4526);
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.

Approach to Analysis

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Proposed Project

Impact AG-1: Effects on Farmland and Forestry

NEPA: Construction and operation of the proposed project would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry. (No Impact)

CEQA: Construction and operation of the proposed project would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

The project site is located within an urban area in the City and County of San Francisco. The California Department of Conservation's Farmland Mapping and Monitoring Program identifies the site as *Urban and Built-Up Land*, which is defined as "...land [that] is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes."²

The project site contains no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest, or timberlands; does not support agricultural or timber uses; is not zoned for agricultural or timber uses;³ and is not under a Williamson Act contract.⁴ The project site is

² California Department of Conservation, Important Farmland in California (Map), Division of Land Resource Protection, Farmland Mapping and Monitoring Program, available online: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_wallsize.pdf, 2008, accessed February 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

³ San Francisco Planning Department, Zoning Map, available online: <http://www.sf-planning.org/index.aspx?page=1569>, accessed February 12, 2013.

⁴ California Department of Conservation, *ibid*.

designated as “urban land” by the United States Department of Agriculture Natural Resources Conservation Services.⁵

As stated in the Project Description, the Proposed Project would include a community garden, and a farmer’s market pavilion. Although these uses would introduce agriculture-related use to the project site, they would not displace existing farmland or forest land.

Therefore, there would be *no impact* under NEPA because the proposed project would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.

Likewise, there would be *no impact* under CEQA because the proposed project would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.

Proposed Project Variant

The project variant would take place in the same location as the project site, which does not comprise existing agricultural or forestry uses and is not zoned for such uses. The effects and impacts described above for the proposed project would be identical under the project variant.

Alternative A: Reduced Development / Density Alternative

Impact A-AG-1: Effects on Farmland and Forestry

NEPA: Construction and operation of the Reduced Development / Density Alternative would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry. (No Impact)

CEQA: The Reduced Development / Density Alternative would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

⁵ United States National Resources Conservation Service. Web Soil Survey, website: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, United States Department of Agriculture, accessed March 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

The alternative would occur within the same boundaries as the proposed project. No farmland, forest land, or lands designated for such uses would be affected.

Therefore, there would be *no impact* under NEPA because the alternative would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.

Therefore, there would be *no impact* under CEQA because the alternative would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.

Alternative B: One-for-One Replacement Alternative

Impact B-AG-1: Effects on Farmland and Forestry

NEPA: Construction and operation of One-for-One Replacement Alternative would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry. (No Impact)

CEQA: The One-for-One Replacement Alternative would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

This alternative would also occur within the same boundaries as the proposed project.

Therefore, there would be *no impact* under NEPA because the alternative would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.

Therefore, there would be *no impact* under CEQA because the alternative would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing

environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.

Alternative C: No Action Alternative

Under the No Action Alternative, no construction or operational changes would occur at the project site. Regardless, as stated above, the project site contains no agricultural or forestry uses.

Therefore, there would be *no impact* under NEPA because the alternative would not contribute to the unnecessary conversion of prime or important farmland to nonagricultural uses or significantly affect soils that may be better suited for natural resource management activities such as farming or forestry.

Therefore, there would be *no impact* under CEQA because the alternative would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use.

4.21.3 Cumulative Impacts

Impact CC-AG: Cumulative Effects

NEPA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts. (No Impact)

CEQA: The proposed project or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts. (No Impact)

Proposed Project, Variant, or Alternatives A and B

As stated above, the project site contains no agricultural or forestry/timberland resources, and the project would result in no impact. Therefore, the proposed project or alternatives could not combine with other projects to result in cumulative impacts to such resources.

Therefore, there would be *no impact* under NEPA because the proposed project, variant, or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts.

Therefore, there would be *no impact* under CEQA because the proposed project, variant, or its alternatives, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative agricultural resource or forestry impacts.

CHAPTER 5

Other NEPA/CEQA Considerations

5.1 Significant and Unavoidable Impacts

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Sections 15126(b) and 15126.2(b) of the CEQA Guidelines, the purpose of this section is to identify impacts that could not be eliminated or reduced to less-than-significant levels by mitigation measures included as part of the project, or by other mitigation measures that could be implemented, as included in Chapter 5, Environmental Setting, Impacts, and Mitigation Measures. These findings are subject to final determination by the San Francisco Planning Commission as part of the CEQA finding for the EIR. If necessary, this chapter will be revised in the Final EIR to reflect the findings of the Planning Commission.

As described in Chapter 4, the impacts listed below would be considered significant and unavoidable, even with implementation of feasible mitigation measures. With the exception of the impacts listed below, all other project impacts would either be no impact, less than significant, or reduced to less-than significant levels by implementation of the identified mitigation measures.

Transportation and Circulation

- Significant and unavoidable cumulative impacts to levels of service at local intersections, in conflict with applicable congestion management programs. This would be a significant unavoidable impact under both NEPA and CEQA.

5.2 Growth Inducement

Section 15126.2(d) of the CEQA Guidelines requires that an environmental impact report (EIR) discuss “the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth.... It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

Growth can be induced directly through the construction of substantial new housing to attract additional population, or indirectly, such as by creating substantial new employment opportunities that attract employees to the area, in turn stimulating demand for additional housing or public services to serve the added workforce, or by extending to a previously

unserved area infrastructure needed to support residential or economic growth, such as roads or essential utility services.

5.2.1 Direct Growth

As described in Section 4.5, Socioeconomics, Population and Housing, based on the ABAG *Regional Housing Needs Plan for the San Francisco Bay Area, 2014–2022*, which identified the San Francisco Bay Area’s housing needs allocation of 187,990 dwelling units for the 2014–2022 planning period. According to this document, San Francisco should provide approximately 28,869 additional dwelling units (6,234 very low-income, 4,639 low income, 5,460 moderate income and 12,536 above moderate income units) for the 2014–2022 planning period to help accommodate regional needs.¹ The proposed project would provide 221 units, or 2.0 percent, of the 10,873 very low- and low-income units needed and 694, or 5.5 percent, of the 12,536 market-rate units needed. In this regard, the project (or its less-intensive alternatives) can be viewed as accommodating anticipated growth, as opposed to encouraging additional growth beyond what is projected.

The project site includes approximately 2.1 million square feet (48.8 acres) not including public streets. The project site is zoned RM-1 or Residential, Mixed (Houses and Apartments) District with an allowable density of 1 unit per 800 square feet.² Thus, approximately 2,659 units would be allowable total under the existing zoning, and the proposed project would include 1,700 units. As such, the proposed number of units is consistent with the planned, allowable development density for the overall project site.

5.2.2 Indirect Growth

Regarding employment, the project would support about 46 retail employees and a few office employees who would staff the community services.³ Therefore, project-related employment growth would compose an insubstantial portion of the projected citywide employment growth of 138,950 new wage and salary jobs by the year 2030,⁴ assuming that all employees in the project would be new to San Francisco. This potential increase in employment would be minimal in the context of the total employment in greater San Francisco and would not be expected to generate substantial new growth.

¹ ABAG, 2013. 2014-2022 Regional Housing Need Plan for the San Francisco Bay Area, 2011-2022. Available on the internet at: http://www.abag.ca.gov/planning/housingneeds/pdfs/2014-22_RHNA_Plan.pdf. Accessed February 27, 2014.

² San Francisco Planning Department, 2013. San Francisco Zoning Map dated January 2013. Available online at: <http://www.sf-planning.org/modules/showdocument.aspx?documentid=9016>. Accessed March 26, 2013.

³ Employment calculations in this section are based on the City of San Francisco *Transportation Impact Analysis Guidelines*, which estimate an average density of 350 square feet per employee assigned to restaurant/retail space, and 276 square feet per employee assigned to office uses.

⁴ See Table 3.5-1. 707,670 projected wage and salary jobs in 2030 minus the estimated 568,720 wage and salary jobs in 2010.

5.3 Irreversible and Irretrievable Commitments of Resources

In accordance with Section 21100(b)(2)(B) of CEQA, and Section 15126.2(c) of the CEQA Guidelines, an EIR must identify any significant irreversible environmental changes that could result from implementation of the proposed project. This may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. According to the CEQA Guidelines, irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Similarly, NEPA requires that an environmental analysis include identification of “...any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented” (42 USC §4332). Such irreversible and irretrievable commitments are related to the use of nonrenewable resources and the effects that this use could have on future generations.

In general, such irreversible commitments include resources such as energy consumed and construction materials used in construction of a proposed project, as well as the energy and natural resources (notably water) that would be required to sustain a project and its inhabitants or occupants over the usable life of the project.

The project would use fossil fuel during demolition of existing buildings and parking lots where new buildings would be located, and in construction of the proposed new buildings themselves. Construction would also require the commitment of construction materials, such as steel, aluminum, and other metals, concrete, masonry, lumber, sand and gravel, and other such materials, as well as water. The proposed project would intensify residential use at the project site. It would commit future generations to an irreversible commitment of energy, primarily in the form of fossil fuels for heating and cooling of buildings, for automobile and truck fuel, and for energy production. The project would require an ongoing commitment of potable water for building occupants and landscaping. Because all development would comply with *California Code of Regulations* Title 24 and the City’s Green Building Ordinance, this development would be expected to use less energy and water over the lifetime of newly constructed buildings than comparable structures not built to current standards.

5.4 Relationship Between Local Short-term Uses of the Environment and the Maintenance of Long-term Productivity

NEPA requires consideration of the relationship between short-term uses of the environment and long-term productivity associated with federal actions (42 USC §4332). This comparison is generally interpreted to recognize that a short-term (temporary) use of the environment may enable the advancement of long-term community needs. For example, construction of a school

would negatively affect traffic and air quality in the short-term, but would fulfill a long-term community need to provide adequate educational facilities for its residents. A community might be willing to accept this trade-off.

5.4.1 Short-Term Uses

Implementation of the proposed project or Alternatives A or B (the Reduced Development / Density Alternative or the One-for-One Replacement Alternative, respectively) would result in temporary and short-term construction-related impacts. Temporary and short-term construction impacts would be associated predominantly with traffic, air quality emissions, and noise. The project sponsor would implement mitigation measures identified in each resource section to reduce these impacts to a less-than-significant level wherever feasible. At the same time, however, construction of the proposed project or Alternatives A or B would create economic benefits during construction, in the form of jobs and the subsequent direct and indirect demand for goods and services.

5.4.2 Long-Term Productivity

Implementation of the proposed project or Alternative A would fulfill a long-term need for local and regional affordable and market-rate housing, but would also result in long-term impacts related to increased traffic. Therefore, while the provision of housing would fulfill a long-term community need, the negative impact to the environment would also be long-term. Implementation of Alternative B would not meet a need for new housing, and it would not have negative impacts related to traffic.

5.5 Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative to the proposed project (Section 15126.6[e]). If it is determined that the “no project” alternative would be the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other project alternatives (Section 15126.6[3]).

Table S-3 compares the impacts of the proposed project and alternatives. Alternative C: No Action / No Project Alternative would have the least environmental impacts. However, based on the above comparison and CEQA Guidelines Section 15126.6[3], the environmentally superior alternative under CEQA is Alternative B: One-for-One Replacement Alternative.

5.6 Areas of Known Controversy and Issues to Be Resolved

On November 16, 2013, the Department of Housing and Urban Development (HUD) published a Notice of Intent (NOI) to Prepare an EIS in the Federal Register. On December 12, 2012, HUD published a notice of the change in date of close of the comment period. On December 19, 2012, the San Francisco Planning Department issued a notice of preparation (NOP) of an EIR.

Individuals, groups, and agencies that received these notices included owners of properties within 300 feet of the project site and other potentially interested parties, including various regional, State, and local agencies. Two scoping meetings were held, on January 5, 2013, and January 12, 2013, to solicit comments on the scope of the EIR/EIS. The NOI, NOP, and Scoping Report are included in Appendix NOP of this document.

Based on the number of comments received on each of the topics listed, the most controversial environmental issues for the proposed project, as expressed by community members, are the following:

- Displacement of tenants during construction,
- Removal of physical barriers to encourage neighborhood integration, and
- Impacts on transportation and circulation (including parking), as well as mitigation measures that would reduce such impacts, and

Other concerns raised during scoping include the cost and funding, as well as the project's possible effects on safety.

An additional area of controversy may emerge regarding the provisions of Senate Bill (SB) 743 as they relate to the proposed project and this EIR/EIS for CEQA purposes. SB 743, which amended the *Public Resources Code* to add section 21099, was signed by Governor Brown on September 27, 2013. Section 21099(d) directs that the aesthetic and parking impacts of mixed-use residential, residential, or employment center infill projects located in transit priority areas are not considered impacts on the environment under CEQA.⁵ The proposed project meets the definition of an employment center infill project in a transit priority area.⁶ Accordingly, this EIR/EIS does not contain a separate discussion of the topic of aesthetics for CEQA purposes, though aesthetics are still analyzed for NEPA purposes in Section 4.4. This EIR/EIS nonetheless provides visual simulations for informational purposes as part of Chapter 2. Similarly, parking is discussed for informational purposes in Section 4.8.

5.7 Other Federal Laws/Executive Orders

The U.S. Department of Housing and Urban Development (HUD) stipulates that specific statutory requirements of federal laws and authorities, and other requirements discussed in 24 CFR § 58.5 and 58.6, be analyzed under NEPA. These federal laws and authorities are analyzed in each applicable section of Chapter 4. These laws and regulations are grouped together below for ease of reference.

⁵ San Francisco Planning Department, Memorandum RE: CEQA Update: Senate Bill 743 Summary – Aesthetics, Parking and Traffic, November 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

⁶ San Francisco Planning Department, Transit-oriented Infill Project Eligibility Checklist, January 10, 2014. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2013.0154E.

5.7.1 Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]

As stated in Section 4.18, Hydrology and Water Quality, the project is not within a floodplain.⁷ The project would comply with the Flood Disaster Protection Act.

5.7.2 Coastal Barrier Resources Act / Coastal Barrier Improvements Act [§58.6(c)]

The Coastal Barrier Resources Act of the United States (CBRA, Public Law 97-348), enacted October 18, 1982, designated various undeveloped coastal barriers, depicted by a set of maps adopted by law, for inclusion in the John H. Chafee Coastal Barrier Resources System (CBRS). Designated areas were made ineligible for direct or indirect federal national security, navigability, and energy exploration. CBRS areas extend along the coasts of the Atlantic Ocean and the Gulf of Mexico, Puerto Rico, the U.S. Virgin Islands, and the Great Lakes, and consist of 857 units. There are no Coastal Barrier Resources in California.⁸

5.7.3 Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]

As described in Section 4.19, Hazards and Hazardous Materials, the project site is not within an Airport Runway Clear Zone.⁹

5.7.4 Wetland Protection [Executive Order 11990]

[[Executive Order 11990, Protection of Wetlands: Applies to any action proposed for construction in a wetland. Avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. Compliance steps not invoked.]]

As described in Section 4.16, Biological Resources, under Impact BI-3, wetlands or waters of the United States or of the State do not occur within the project site.¹⁰

⁷ Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at <http://sfgsa.org/index.aspx?page=828>, accessed July 14, 2010; San Francisco Interim Citywide Floodplain Map, Final Draft, July 2008, available on the internet at: <http://sfgsa.org/Modules/ShowDocument.aspx?documentid=1761>. Reviewed April 10, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁸ United States Fish & Wildlife Service. *Coastal Barrier Resource System*. available Online: <http://www.fws.gov/CBRA/Act/index.html#CBRS>, accessed March 26, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

⁹ City/County Association of Governments of San Mateo County, *Comprehensive Land Use Compatibility Plan for the Environs of San Francisco International Airport*, available online: http://www.ccag.ca.gov/pdf/plans-reports/2012/Consolidated_CCAG_ALUCP_10-29-12.pdf, October 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁰ U. S. Fish and Wildlife Service. Publication date (found in metadata). National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/wetlands/>. Accessed March 29, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

5.7.5 Coastal Management Zone [Coastal Management Zone Act, 1972, sec. 207 (c) and (d)]

[[Sections 307(c), (d) Applies to any proposed activity affecting areas covered by an approved coastal zone management plan. Ensure that projects are consistent with coastal zone program. Compliance steps not invoked.]]

The San Francisco Bay Conservation and Development Commission (BCDC) has permit authority over San Francisco Bay and lands located within 100 feet of the Bay shoreline. BCDC's *San Francisco Bay Plan* is the Coastal Zone Management Program for the San Francisco Bay Segment of the California Coastal Zone Management Program, pursuant to the Federal Coastal Zone Management Act (CZMA).¹¹ Under the CZMA, projects requiring federal approval or funding must, to the maximum extent practicable, be consistent with a state's coastal management program if the project would affect the coastal zone.

The project site is located more than 1 mile from the San Francisco Bay shoreline. No formal finding of consistency with the *San Francisco Bay Plan* is required.

5.7.6 Historic Preservation [36 CFR Part 800]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. [Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references]. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

Compliance with Section 106 of the Historic Preservation Act is described in Section 4.7, Cultural and Paleontological Resources. Applicable consultations and responses are included in **Appendix CP**.

5.7.7 Floodplain Management [Executive Order 11988; 24 CFR Part 55]

[[Flood Disaster Protection Act of 1973 (P.L. 93-291) and implementing regulations; National Flood Insurance Program (44 CFR Parts 59-79); 24 CFR 55, Executive Order 11988. Avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Compliance not invoked.]]

As stated in Section 4.18, Hydrology and Water Quality, the project is not within a floodplain.¹² The project would comply with Executive Order 11988.

¹¹ San Francisco Bay Conservation and Development Commission. San Francisco Bay Plan. Adopted in 1968. Reprinted in January 2007. http://www.bcdc.ca.gov/laws_plans/plans/sfbay_plan.shtml. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹² Federal Emergency Management Agency, Preliminary Flood Insurance Rate Map, City and County of San Francisco, California, Panels 92A, 94A, 110A, 111A, 112A, 120A, 130A, 140A, 210A, 235A, and 255A, September 21, 2007, available on the Internet at <http://sfgsa.org/index.aspx?page=828>, accessed July 14, 2010; San Francisco Interim Citywide Floodplain Map, Final Draft, July 2008, available on the internet at: <http://sfgsa.org/Modules/ShowDocument.aspx?documentid=1761>. Reviewed April 10, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

5.7.8 Sole Source Aquifers [40 CFR 149]

[[40 CFR 149, Applies to federally assisted project which may contaminate an aquifer designated by EPA as the sole source of drinking water for a community. Prohibits financial assistance of projects which EPA determines may contaminate a designated sole source aquifer. Compliance steps not invoked.]]

As stated in Section 4.18, Hydrology and Water Quality, the project is not served by an EPA-designated sole-source aquifer watershed and would not affect a sole-source aquifer subject to the HUD-EPA Memorandum of Understanding.^{13,14,15}

5.7.9 Endangered Species Act [50 CFR 402]

The project's compliance with the Endangered Species Act is documented in Section 4.16, Biological Resources, under Impacts BI-1 and BI-2.

5.7.10 Wild and Scenic Rivers [16 U.S.C. 1271, Sec. 7(b),(c)]

[[Sections 7 (b), (c); applies to rivers designated under the Act and proposed activity affecting rivers on the Nationwide Inventory of potential wild, scenic and recreational rivers. Assure that Federal actions do not foreclose designation under the Wild and Scenic Rivers Act. Compliance steps not invoked.]]

The National Wild and Scenic Rivers System protects rivers designated for their wild, scenic, or recreational values.¹⁶

As stated in Section 4.4, Visual Quality / Aesthetics, the City and County of San Francisco contain no wild or scenic rivers.

5.7.11 Clean Air Act [40 CFR Parts 6, 51, 93]

[[Clean Air Act, Sections 176 (c) and (d), and 40 CFR 6, 51, 93; Applies to all federal actions. Federal actions must conform to the State Implementation Plan.]]

The project's consistency with the Clean Air Act is described in Section 4.10, Air Quality. As stated there, the project site is located in an air basin designated as a nonattainment area for the

¹³ United States Environmental Protection Agency, Groundwater website: <http://epa.gov/region09/water/groundwater/ssa.html>, Pacific Southwest, Region 9, accessed April 8, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁴ United States Environmental Protection Agency, Sole Source Aquifers subject to HUD-EPA Memorandum of Understanding, dated April 30, 1990. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁵ United States Environmental Protection Agency, Sole Source Aquifers in Region 9, Internet Web Site: <http://www.epa.gov/region9/water/groundwater/ssa-pdfs/ssafact.pdf>, accessed April 8, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁶ United States Forest Service, *National Wild and Scenic Rivers System: September 2009* (Map), United States Department of Agriculture, available online: <http://www.rivers.gov/rivers/california.php>, accessed April 12, 2013.

8-hour ozone and 24-hour PM_{2.5} standards and as a maintenance area for the CO standard.¹⁷ The proposed project would not exceed the applicability (de minimis) thresholds for General Conformity; therefore, the proposed project would not violate or contribute to new violations of the NAAQS, would not increase the frequency or severity of existing violations of the NAAQS, and would not delay timely attainment of the NAAQS for ozone or PM_{2.5} and a formal General Conformity determination is not required.

5.7.12 Farmland Policy Act [7 CFR Part 658]

[[7 CFR 658; applies to any federally assisted action which encourages the conversion of prime, unique, State/locally important farmlands. Compliance requires that extent to which Federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses be minimized. Compliance steps not invoked.]]

The Farmland Protection Policy Act discourages Federal activities that would convert farmland to nonagricultural purposes. Prime and important farmland includes all land that is defined as prime, unique, or farmlands of statewide or local importance. As stated in Section 4.21, Agricultural and Forest Resources, the project site is not designated as prime or important farmland according to the California Farmland Mapping and Monitoring Program and the United States Web Soil Survey.^{18,19}

5.7.13 Environmental Justice [Executive Order 12898]

[[Executive Order 12898; states that federal agencies shall identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations]]

The proposed project's compliance with Executive Order 12898 is documented in Section 4.06, Environmental Justice.

5.7.14 Noise Abatement and Control [24 CFR Part 51, Subpart B]

[[24 CFR 51 B; applies to HUD requirements related to noise; contains standards for exterior noise levels along with policies for approving HUD-supported or -assisted housing projects in high-noise areas. The requirements establish three zones: an acceptable zone where all projects could be approved, a normally unacceptable zone where mitigation measures would be required and where each project would have to be individually evaluated for approval or denial, and an unacceptable zone in which projects would not as a

¹⁷ BAAQMD, Air Quality Standards and Attainment Status, available online at: http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed April 20, 2011.

¹⁸ California Department of Conservation, Important Farmland in California (Map), Division of Land Resource Protection, Farmland Mapping and Monitoring Program, available online: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2008/fmmp2008_wallsize.pdf, 2008, accessed February 12, 2013. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

¹⁹ United States National Resources Conservation Service. Web Soil Survey, website: <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, United States Department of Agriculture, accessed March 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

rule be approved. HUD's regulations also require that recipients of Community Development Block Grant or HOME funds take into consideration the noise criteria and standards in the environmental review process and consider ameliorative actions when noise sensitive land developments are proposed in noise exposed areas.²⁰ Compliance invoked.]]

The project's compliance with exterior noise levels requirements are described in Section 4.09, under Impact NO-1. The project, with incorporate of identified mitigation measures, would meet HUD standards.

5.7.15 Explosive and Flammable Operations [24 CFR Part 51 C]

[[24 CFR 51 C; HUD will not approve an application for assistance for a proposed project located at less than the acceptable separation distance from a hazard unless appropriate mitigation measures are implemented or are already in place.]]

As stated in Section 4.19, Hazards and Hazardous Materials, the proposed project site is located adjacent to the Gleneagles golf course, Crocker Amazon Playground, and residential neighborhoods that generally do not handle substantial quantities of hazardous materials. According to records of registered above ground storage tanks (AST), the nearest AST to the project site is approximately half-a-mile away. Using the HUD Acceptable Separation Distance calculator, this 2,500 gallon fuel tank has an acceptable separation distance of 405 feet for thermal radiation protection and 77 feet for buildings, which is well below the existing separation distance of the proposed project.²¹

5.7.16 Toxic Chemicals and Radioactive Materials [24 CFR Part 58, Sec 5(i)(2)]

[[24 CFR 58.5 (i)(2); applies to all actions. Minimize the impact of environmental hazards on HUD-assisted activities – chemical and radioactive material, activities of flammable or explosive nature, aircraft hazards.]]

The project's less-than-significant impacts associated with hazardous materials are documented in Section 4.19.

²⁰ U.S Department of Housing and Urban Development, *The Noise Guidebook*, Office of Community Planning and Development, available online: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/training/guidebooks/noise, accessed August 17, 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

²¹ Housing and Urban Development, Acceptable Separation Distance (ASD) Electronic Assessment Tool, <http://www.hud.gov/offices/cpd/environment/asdcalculator.cfm>, accessed April 10, 2013.

5.7.17 Airport Clear Zones and Accident Potential Zones [24 CFR Part 51 Subpart D]

[[24 CFR 51 D; It is HUD general policy to apply standards to prevent incompatible development around civil airports and military airfields]]

As described in Section 4.19, Hazards and Hazardous Materials, the project site is not within an Airport Clear Zone or Accident Potential Zone.²²

²² City/County Association of Governments of San Mateo County, *Comprehensive Land Use Compatibility Plan for the Environs of San Francisco International Airport*, available online: http://www.ccag.ca.gov/pdf/plans-reports/2012/Consolidated_CCAG_ALUCP_10-29-12.pdf, October 2012. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0305E.

CHAPTER 6

List of Preparers

6.1 Lead Agencies

San Francisco Planning Department
Environmental Planning
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San Francisco, CA 94103

- Environmental Review Officer: Sarah Jones
- Senior Environmental Planner: Jessica Range
- Environmental Planner: Kansai Uchida
- Transportation Planner: Brett Bollinger
- Air Quality Specialist: Wade Wietgreffe
- Archeologist: Randall Dean

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- Environmental Compliance Manager: Eugene T. Flannery

6.2 Consultant Team

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- | | |
|-----------------------------------|-------------------|
| • Project Director: Karl Heisler | • Reema Mahamood |
| • Project Manager: Jonathan Carey | • Alisa Moore |
| • Lisa Bautista | • Victor Mullins |
| • Chuck Bennett | • Anthony Padilla |
| • Brad Brewster | • Chris Rogers |
| • Mike Burns | • Chris Sanchez |
| • Peter Costa | • Eric Schniewind |
| • Michelle Giolli | • Tania Sheyner |
| • John Hart | • Jennifer Wade |
| • Jack Hutchison | |
| • Heidi Koenig | |

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- Angela Lin

CHS Consulting Group

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- Migi Lee
- Chi-Hsin Shao

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- Ernie Avila, Principal

Van Meter Williams Pollack

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- Steve Murray

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San Francisco, CA 94104

- Steven L. Vettel, Partner

CHAPTER 7

Distribution List

This Draft EIR/EIS will be distributed to the federal, state, regional, and local agencies listed in this section. Distribution of the Draft EIR/EIS may be by hard copy, electronic media, reference to the websites on which the document is available, or a combination of these. In addition, the Notice of Availability of the Draft EIR/EIS will be distributed to residents of the project site, as well as all properties within 300 feet of the project site. The document will also be available for public review at <http://www.sf-planning.org/sfceqadocs> and <http://sf-moh.org/index.aspx?page=155>.

7.1 Federal Agencies

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W-260
Sacramento, CA 95825-1846

US EPA Headquarters Office
NEPA Compliance Division
401 M Street
Washington, DC 20640

US EPA Region IX
75 Hawthorne Street
San Francisco CA 94150

US Army Corps of Engineers
San Francisco District
1455 Market Street, 16th Floor
San Francisco, CA 94103

7.2 State and Regional Agencies

Northwest Information Center
Attn: Leigh Jordan, Coordinator
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, CA 94928

State Office of Intergovernmental Management
State Clearinghouse
1400 Tenth Street, Room 121
PO Box 3044
Sacramento, CA 95812-3044

Caltrans
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Local Development-Intergov. Review
111 Grand Avenue (MS-10D)
Oakland, CA 94612-3717

Caltrans
Attn: Erik Alm, District Branch Chief
111 Grand Avenue (MS-10D)
Oakland, CA 94612-3717

Office of Historic Preservation
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California Department of Parks and Recreation
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San Francisco Bay Region
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Bay Area Rapid Transit District
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Oakland, CA 94612

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San Francisco, CA 94116

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Cal EPA/DTSC
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Berkeley, CA 95710

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Environmental Planner
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Association of Bay Area Governments
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Oakland, CA 94604-2050

California Department of Fish and Game
Central Coast Region
PO Box 47
Yountville, CA 94559

California Integrated Waste Management
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Permitting & Inspection Branch
1001 I Street
Sacramento, CA 95812

Metropolitan Transportation Commission
101 8th Street
Oakland, CA 94607

Office of Historic Preservation
California Department of Parks and Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

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Department
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1660 Mission Street, 1st Floor
San Francisco, CA 94103

City and County of San Francisco Planning
Department
Attn: Jonas Ionin, Commission Secretary
1650 Mission Street, Ste. 400
San Francisco, CA 94103

The Planning Department
Environmental Planning
Attn: VirnaLiza Byrd
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San Francisco, CA 94103

City and County of San Francisco Historical
Preservation Commission
1650 Mission Street, Ste. 400
San Francisco, CA 94103

City and County of San Francisco Office of
Economic and Workforce Development
1 Dr. Carlton B Good Place
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CHAPTER 8

Acronyms, Abbreviations, and Glossary

8.1 Acronyms and Abbreviations

2010 CAP	2010 Clean Air Plan
3-D	three dimensional
ABAG	Association of Bay Area Governments
ACHP	Advisory Council on Historic Preservation
ACI	American Concrete Institute
ACMs	asbestos-containing materials
ADA	Americans with Disabilities Act
ADRP	Archaeological Data Recovery Plan
ADT	average daily travel
AIA	airport influence area
AISC	American Institute of Steel Construction
ALS	Advanced Life Support
APE	Area of Potential Effect
ARB	California Air Resources Board
ASA	Archaeological Sensitivity Analysis
ASCE	American Society of Civil Engineering
ASD	acceptable separation distances
AST	above ground storage tanks
ATP	Archaeological Testing Plan
AUGF	Authority to Use Grant Funds
AWSS	Auxiliary Water Supply System
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin

BCDC	San Francisco Bay Conservation and Development Commission
BLS	Basic Life Support
BMPs	best management practices
BMR	Below Market Rate
BRT	Bus Rapid Transit
BWWF	Bayside Wet Weather Facilities
C&D	Construction and Demonstration
C-3	Commercial District
CAA	Clean Air Act
CAFÉ	corporate average fuel economy
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
CalOSHA	State Occupational Safety and Health Administration
Caltrans	California Department of Transportation
C-APE	CEQA APE
CBC	<i>California Building Code</i>
CCAA	California Clean Air Act
CCR	<i>California Code of Regulations</i>
CCSF	City and County of San Francisco
CDBG	Community Development Block Grant
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	<i>Code of Federal Regulation</i>
CGS	California Geological Service
CH ₄	methane
CIP	Capital Improvement Program
CMP	Congestion Management Plan
CNDDDB	California Natural Diversity Database

CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CO ₂ E	carbon dioxide equivalent measures
COGs	Council of Governments
Corps	US Army Corps of Engineers
CRHR	California Register of Historic Resources
CRM	Construction Resources Management
CSO	Combined Sewer Overflow
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CY	cubic yards
dB	decibels
dBA	A-weighted decibels
DBI	Department of Building Inspection
DDT	dichlorodiphenyltrichloroethane
DEHP	Di(2-ethylhexyl) phthalate
DNL	day-night average sound level
DOE	San Francisco Department of Environment
DPT	Division of Parking and Traffic
DPW	San Francisco Department of Public Works
EB	Eastbound
EIR	environmental impact report
EIS	Environmental Impact Statement
EISA	Energy and Independence Security Act of 2007
EO 12898	Executive order 12898
EP	San Francisco Planning Department, Environmental Planning Division
EPCA	Energy Policy and Conservation Act
ESA	Environmental Science Associates
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FARR	Final Archaeological Resources Report

FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FICON	Federal Interagency Committee on Noise
FIRMS	Flood Insurance Rate Maps
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
FTE	full-time equivalent
FY	Fiscal Year
<i>General Plan</i>	<i>San Francisco General Plan</i>
GHG	greenhouse gas
GSF	Gross Square Footage
GWH	gigawatt hours
HCD	Housing and Community Development
HCM 2000	<i>Highway Capacity Manual 2000</i>
HEPA	High Efficiency Particulate Air Filter
HOME	Home Investment Partnership Program
HOPE	Housing Opportunities for People Everywhere
HRER	historic resource evaluation response
HUD	Housing and Urban Development
HVAC	heating ventilation and air-conditioning
HWCL	Hazardous Waste Control Law
Hz	hertz
I-280	Interstate 280
IBC	International <i>Building Code</i>
IIPP	Injury and Illness Prevention Program
IPM	integrated pest management
JPB	Joint Powers Board
LEED	Leadership in Energy and Environmental Design
LEED-ND	Leadership in Energy and Environmental Design-Neighborhood Design
Lea	equivalent level sound pressure level
LID	low-impact design
LOS	Level of Service

LTS	Less than significant or negligible impact; no mitigation required
LTSM	Less Than Significant Impact with Mitigation
mgd	million gallons per day
MLD	Most Likely Descendant
MLP	maximum load point
MOA	Memorandum of Agreement
MOHCD	Mayor's Office of Housing and Community Development
mph	miles per hour
MPOs	Metropolitan Planning Organization
MRZ	Mineral Resource Zones
MSDS	material safety data sheets
MT	metric tons
MTC	Metropolitan Transportation Commission
MTCO ₂ e	metrics ton of carbon dioxide equivalent
MTS	Metropolitan Transportation System
Muni	San Francisco Municipal Railway
Mw	Maximum Moment Magnitude Earthquake
MWh	million megawatt-hours
N ₂ O	nitrous oxide
NAHC	native american heritage commission
NB	Northbound
NC-1	Neighborhood Commercial
ND	Neighborhood Development
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NI	No Impact
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NOP	Notice of Preparation

NPDES	National Pollutant Discharge Elimination System
NPPA	California Native Plant Protection Act
NPWWF	North Point Wet Weather Facility
NRHP	National Register of Historic Places
NRHR	National Register of Historic Resources
NWI	National Wetlands Inventory
NWIC	Northwest Information Center
OHP	Mayor's Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
P	Public Use
PA	Programmatic Agreement
PCB	polychlorinated biphenyl
PG&E	Pacific Gas & Electric
PGA	Peak ground acceleration
PIC	Planning Information Center
PPD	person per day
ppm	parts per million
PPV	peak particle velocity
PRC	<i>Public Resources Code</i>
PRD	permit registration documents
proposed project or project	Sunnydale-Velasco HOPE SF Master Plan project
QACL	Qualified Archaeological Consultants List
RAP	Relocation Assistance Plan
RARAP	Residential Anti-displacement and Relocation Assistance Plan
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RH	Residential House
RH-2	Residential House, two dwellings per lot
RM-1	Residential, Mixed (Houses and Apartments) District
RMP	Risk management plan
ROSE	Recreation and Open Space Element
RPS	renewables portfolio standard

RROF	Request for Release of Funds
RWQCB	Regional Water Quality Control Board
SAB	State Allocation Board
SamTrans	San Mateo County Transit District
SB	Senate Bill
SB	Significant and Beneficial
SB	Southbound
SCS	sustainable communities strategy
SDC	Seismic Design Category
SEWPCP	Southeast Water Pollution Control Plant
SF-CHAMP	San Francisco Chained Activity Modeling Process
SFCTA	San Francisco County Transportation Authority
SFDPH	San Francisco Department of Public Health
SFFD	San Francisco Fire Department
SFHA	San Francisco Housing Authority
SFMTA	City and County of San Francisco Municipal Transportation Agency
SFPD	San Francisco Police Department
SFPUC	San Francisco Public Utilities Commission
SFRPD	San Francisco Recreation and Parks Department
SFUSD	San Francisco Unified School District
SHPO	State Historic Preservation Officer
SM	Significant but mitigable impact
SMARA	Surface Mining and Reclamation Act
SMP	Site Mitigation Plan
SNRAMP	Significant Natural Resources Area Management Plan
SRS	Summary Reporting System
STC	sound transmission class
SU	Significant and unavoidable adverse impact, no feasible mitigation
SUD	Special Use District
SUM	Significant Unavoidable Impact with Mitigation
SVP	Society of Vertebrate Palentology

SWRCB	State Water Resources Control Board
TAAS	Theoretically Available Annual Sunlight
TeNS	technical noise supplement
TEP	Transit Effectiveness Project
TIS	Transportation Impact Study
TMDLs	total maximum daily loads
TTRP	travel time reduction proposal
TURF	Together United Recommitted Forever
U.S. EPA	United States Environmental Protection Agency
UCMP	University of California Museum of Palontology
URA	Uniform Relocation Act
U.S. 101	U.S. Highway 101
USFWS	US Fish and Wildlife Service
USGS	United States Geological Service
UWMP	2010 Urban Water Management Plan
VDED	verified diesel emission control
VOC	volatile organic compound
WB	Westbound
WBT	westbound through
WSA	2013 Water Supply Availability Study
WSAP	Water Shortage Allocation Plan
WSIP	Water Supply Improvement Program

8.2 Glossary of Terms

CEQA (California Environmental Quality Act). State law (*Public Resources Code* Section 21000, et seq.) that requires state, local, and other agencies to evaluate the environmental implications of their actions.

Cultural resource. A nonrenewable remain of human activity that is valued by or significantly representative of a culture or that contains significant information about a culture. Cultural resources encompass archaeological, traditional, and built environment resources, including landscapes or districts, sites, buildings, structures, objects, or cultural practices that are usually greater than 50 years of age and possess architectural, historic, scientific, or other technical value.

Cumulatively considerable. A CEQA term used to indicate whether or not a cumulative impact is significant.

EIR (environmental impact report). A report required by the California Environmental Quality Act to describe the environmental impact of a proposed project.

EIR certification. EIR adoption by a governing agency that involves acceptance of the document as being complete and adequate according to the California Environmental Quality Act.

EIS (environmental impact statement). An EIS is a detailed analysis that serves to ensure that the policies and goals defined in NEPA (below) are infused into the ongoing programs and actions of the federal agency. EISs are generally prepared for projects that the proposing agency views as having significant prospective environmental impacts. The EIS should provide a discussion of significant environmental impacts and reasonable alternatives (including a No Action alternative) which would avoid or minimize adverse impacts or enhance the quality of the human environment.

Level of service (LOS). A qualitative description a facility's performance based on average delay per vehicle, vehicle density, or volume-to-capacity ratios. Levels of service range 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.

Mitigation. One or all of the following: (1) Avoiding an impact altogether by not taking a certain action or parts of an action; (2) minimizing impacts by limiting the degree or magnitude of an action and its implementation; (3) rectifying an impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating an impact over time by preservation and maintenance operations during the life of an action; and (5) compensating for an impact by replacing or providing substitute resources or environments.

NEPA (National Environmental Policy Act, 42 U.S.C. 4321 et seq.) establishes national environmental policy and goals for the protection, maintenance, and enhancement of the environment and provides a process for implementing these goals within the federal agencies. The Act also establishes the Council on Environmental Quality (CEQ). Title I of NEPA contains a Declaration of National Environmental Policy which requires the federal government to use all practicable means to create and maintain conditions under which man and nature can exist in

productive harmony. Section 102 requires federal agencies to incorporate environmental considerations in their planning and decision-making through a systematic interdisciplinary approach. Specifically, all federal agencies are to prepare detailed statements assessing the environmental impact of and alternatives to major federal actions significantly affecting the environment. These statements are commonly referred to as EISs.